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CHEMICAL MARKETING REPORTER's market index of chemicals and related materials (100=1974 average), based on 97 key commercial chemicals, appears alongside with data for two weeks ago, last month and last year.

Dec. 5, 1986	153.12
Nov. 28, 1986	151.83
Nov. 7, 1986	152.33
Dec. 6, 1985	153.19

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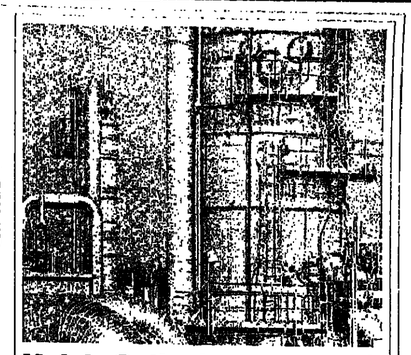

Maleic Outlook 3

Maleic Balance Is Predicted

Monsanto Chemical Company plans a 20-million-pound-per-year debottlenecking project at its maleic anhydride plant in Pensacola, Fla. Producers say that healthy demand rate should enable Monsanto's new capacity and a planned expansion by Denka Chemical Corporation to be readily absorbed by the market.

The debottlenecking will move Monsanto's capacity to 199 million pounds per year by the end of 1988. This is said to be the first phase of a plan to increase capacity to 230 million pounds by 1990.

Denka plans to add 20 million pounds to its 50-million-pound-per-year facility in Houston by next May. "It's a pretty healthy market," says a company spokesman, and "we expect normal growth of our internal demand with maleic acid and our customer base to take care of our expansion."

Producers say that overall demand has grown this year at a 3 to 4 percent, GNP-style rate, and they expect this rate to be maintained for the foreseeable future. Monsanto estimates that the present consumption rate is between 365 million and 370 million pounds per year in an industry with a capacity of 383 million pounds per year.

Projecting a 4 percent consumption growth rate to the end of 1988, three-fourths of Monsanto and Denka's combined new capacity would satisfy the higher demand level, with industry capacity reaching 423 mil-

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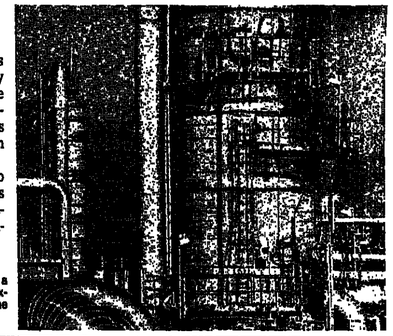


MONSANTO AT PENSACOLA: The company has completed a 200-million-pound-a-year debottlenecking project here. It's expected that the new capacity will be readily absorbed by the market.

SmithKline Enters Accord On Heart Drug Development

SmithKline Beckman Corporation and Boehringer Mannheim have agreed to collaborate on the worldwide development and marketing of new cardiovascular drugs discovered by Boehringer Mannheim. Terms of the preliminary agreement were not disclosed.

Under the accord, the two firms will form a series of individual partnerships in which SmithKline will have responsibility for development and marketing in the US and Canada.

The two companies may co-market certain of the products in the US and other major world markets, according to SmithKline.

Initial activity will focus on clinical development and marketing of several products, including carvedilol, a vasodilator beta-blocker to treat mild to moderate hypertension and angina.

According to SmithKline Beckman, the drug's balance of vasodilation and beta blockade will make it possible to treat patients who do not respond to current beta blocker therapy, such as those with both hypertension and peripheral vascular disease.

The drug is said to be well advanced in clinical trials in many world markets, including the US. An application for marketing approval in Germany will be submitted this month, while applications in other European countries may begin in 1988. It is anticipated that an application for marketing approval will be submitted to US regulatory authorities in 1989.

The companies will also concentrate on development of thromboxane receptor antagonists. Two compounds are in clinical evaluation in Europe and will enter clinical trials in the US next year.

These compounds are described as a new class of medicines that inhibit platelet aggregation. They will be used to treat acute myocardial infarction (heart attack), coronary artery disease, and possibly renal and peripheral vascular disease, according to SmithKline.

Curt Engelhorn, chairman of Boehringer Mannheim, said last week that the agreement with SmithKline will "allow for the expeditious development and worldwide commercialization of compounds from our research." He added that the agreement provides his company with "the opportunity to establish a major pharmaceutical presence in the US."

Henry Wendt, president and chief executive officer of SmithKline, said his firm has been "impressed" by Boehringer's cardiovascular medicine research. "Their R&D effort and investment are significant and dovetail well with our own discoveries and development activities," he said.

Petainer SA Ends License Agreement with Coca-Cola

Petainer SA, the European owner of the Petainer plastic can patents, has terminated its license agreement with the Coca-Cola Company to enable Petainer to seek other arrangements for testing the Petainer plastic soft drink container in the US and Canada.

The license agreement gave Coca-Cola exclusive rights to utilize the polyethylene terephthalate resin container technology for packaging soft drinks and mixers in the US and Canada for a period of up to five years.

Dorsey Corporation, which announced the termination of the licensing accord, is one of the three packaging companies which are partners in the Petainer Development Company of Atlanta, a joint venture licensed by Petainer to develop plastic container technology in the US.

Petainer Development Company is a joint venture of Sewell Plastics Inc., a subsidiary of the Dorsey Corporation of Chattanooga; PLM America Inc. of Atlanta, a subsidiary of PLM AB of Malmo, Sweden; and Metal Box America Inc., of Westport, Conn., a subsidiary of Metal Box PLC of Reading, England. Petainer S.A. is jointly owned by PLM AB and Metal Box PLC, and is based in Switzerland.

Following a limited market test in Columbia, in the fall of 1985, Coca-Cola reported favorable consumer reaction to the transparent can-shaped containers made of bottle grade polyethylene terephthalate (PET) resin, which is biodegradable. However, in its view, acceptable recycling systems are in place, so that biodegradability isn't a necessary requirement.

Since that time, Petainer Development Company has begun start-up and debugging tests at its Atlanta can development plant.

Because Petainer Development Company believes that a practical recycling plan has been developed and can be implemented and improved only by further testing, Petainer is terminating its license to Coca-Cola, and intends to explore other possibilities.

Further testing depends upon, among other things, an agreement with a bottler to conduct such market testing.

Shintech's K-Bin Enters PVC Field

Last week, Shintech Incorporated announced that K-Bin Incorporated, its new wholly-owned subsidiary (CMR, 9/22/86, page 45) has begun commercial production of plastic molding compounds.

These products will serve the growing PVC bottle industry, rigid film and sheet manufacturing and profile extrusion applications.

Chihiro Kanagawa, president and CEO of Shintech, a leader in the PVC resin business, announced that the K-Bin operation repre-

Continued on Page 12

Chemical Marketing Reporter

VOLUME 230
Number 24

DECEMBER 15, 1986

Chemical Recovery Follows Restructuring

US chemical manufacturers made a strong recovery during 1986, benefitting from the costly restructuring and reorganization which made last year one of the worst in its history, the industry's chief economist said last week.

Releasing Chemical Manufacturers Association's annual economic survey of its member companies, Myron Foveaux said the industry's 1986 earnings are expected to be a record $13.3 billion — 54.5 percent above 1985 earnings.

However, the 1986 earnings performance is only 2.3 percent above the previous record of $13 billion set in 1981 and again in the post-recession recovery year of 1984.

According to the survey, the rebound in earnings was achieved on a modest increase in sales. Total industry sales during 1986 are expected to be $216 billion, or just 1 percent above 1985.

The industry's trade picture also improved this year. For the first time in five years, the chemical trade surplus rose by 5 percent, to $7.6 billion. US chemical exports are expected to reach $22.7 billion, or 10.5 percent of total industry shipments. Chemical imports, however, continued to climb by 4 percent over 1985 to a record $15.1 billion.

The survey figures are all estimates, as final figures will not be released by commerce Department until April.

According to the survey, CMA member companies, which account for more than 90 percent of the domestic chemical industry's production capacity, expect further improvements in earnings and sales in 1987. Sales are forecast to rise by 6 percent next year and earnings are predicted to be 10 percent above 1986.

Mr. Foveaux, CMA's trade and economic policy advisor, said several factors contributed to the turnaround in earnings performance for 1986.

"Productivity and unit costs have been improved by the shutdown of older plants," he noted. "Breakeven costs have been reduced. Raw material price decreases have not been completely offset by lower chemical selling prices. Also, the lower dollar value has helped exports and dampened imports moderately."

The most significant factor, Mr. Foveaux said, was that chemical companies did not have to repeat the heavy 1985 write-offs against operating earnings.

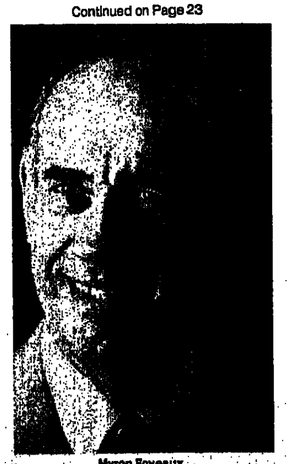
"The bunching of asset write-offs and heavy restructuring costs in 1985 that severely depressed net earnings were not repeated this year," he noted. "Net earnings after taxes regained the lost ground of 1985 with almost no increase in sales."

He said companies also benefitted from an improved operating rate — another result of the major restructuring and reorganization. The industry's operating rate rose to 80.5 percent of capacity. As recently as 1982, the industry operated at only 66 percent of capacity, the lowest level in the post-war era.

The survey also found that industry employment continued to decline. The estimated 1,028,000 workers employed in the domestic industry in 1986 is 81,000 below the industry record of 1,109,000 in 1981.

Capital spending grew 5 percent over 1985,

Continued on Page 23



Myron Foveaux

Beta Carotene Market Expands As New Uses, Producers Appear

Bolstered by promises of new applications in pharmacology, the beta-carotene market continues to expand. Producers of both synthetic and natural beta-carotene are confident that research reports connecting the product with anti-cancer properties as well as uses as a safer alternative to vitamin A will increase demand in the future. Some sources put yearly sales at about $10 million to $15 million (some put figure as high as $25 million) and one very optimistic source expects the market to grow to $100 million by the end of the decade.

Right now, the big players are still the producers of synthetic beta-carotene, Hoffmann-La Roche Inc. and BASF Corporation. The market share for the natural product is relatively limited.

Cyanotech Corporation in Woodinville, Wash., is offering an all natural beta-carotene drived from algae grown in ponds in Hawaii. According to Dan Anderson, technical director in charge of new products there, production capacity has been about 300 kilos per month since June of this year. Production is expected to triple by next February.

Mr. Anderson says his company makes a 7.5 percent powdered product, at present the most potent of the natural products on the market. It sells for about 60 to 80 percent above the price for the synthetic product.

As previously reported, Eastman Kodak Company and Microbio Resources Inc. have concluded an agreement giving Kodak's bioproducts division the world marketing rights to Microbio's "Provatene", adding another producer of natural beta-carotene from algae to the market.

According to a spokesman for Microbio, "Provatene" is derived from algae,

Continued on Page 20

Chinese Slate Ammonia Plant

M. W. Kellogg Company will provide process technology for a new 600-metric-ton-per-day ammonia plant to be constructed in Sichuan, in the People's Republic of China.

The $50-million facility will be constructed by Sichuan Chemical Works and is scheduled to start production in late 1989.

According to Kellogg, ammonia plants based on its technology consume less than 25 million Btu's for each short ton of ammonia produced, or about 75 percent of the Btu's used in conventional ammonia production. The plants also use only half the fuel required for conventional plants.

Kellogg says the Chinese plant will be designed to be even more energy efficient than other units based on its technology.

PMA Priority To Be Patents

The president of the Pharmaceutical Manufacturers Association said last week that the drug industry will give priority to gaining stronger patent protection for its products in Mexico, Argentina, Brazil, Taiwan, India, and Indonesia.

Gerald J. Mossinghoff told a colloquium on intellectual property of the National Research Council, National Academy of Sciences, that legislation already is pending in Korea and Canada to give pharmaceuticals stronger patent protection. The association has worked closely with the current Administration on intellectual property protection issues, he says.

Mr. Mossinghoff says Pharmaceutical Manufacturers Association has identified 25 countries where protection for intellectual property is inadequate or lacking altogether.

"Many of these countries now host growing national pharmaceutical industries that are . . . fully capable of exploiting the lack of protection for the patent holder," Mr. Mossinghoff says. "We are now facing situations worldwide where the annual loss of revenue runs into hundreds of millions of dollars."

Mr. Mossinghoff is a former U.S. Commissioner of Patents and Trademarks.

BP PVC Compounder Acquired by Vista

BP Performance Polymers Inc. has signed a letter of intent to sell its PVC compound business to Vista Chemical Company, Houston, Tex. Price of the transaction was not disclosed.

The sale includes a 12-acre site at Mansfield, Mass., know-how, formulations, approvals and BP PPI's current customer list for PVC compounds. BP PPI will continue to manufacture a range of PVC compounds at its Visalia, Calif., plant for Vista.

BP PPI will act as sales and marketing agent for PVC compounds to several wire and cable accounts on Vista's behalf in addition to pursuing its main business in the manufacture and supply of polyethylene polymer compounds to the wire and cable, telecommunications and automotive industries.

The transaction is expected to be completed by the end of January 1987. BP PPI announced on September 10th its plans to expand its polyethylene business in the US by making substantial investments for extra-

Continued on Page 23

Canadian Argon Unit Is Under Construction

Canadian Oxygen Limited, sister company of Airco Industrial Gases, is building a new argon recovery plant in Courtright, Ontario. The argon will be marketed in the US by Airco, and will also be sold in Eastern Canada.

The plant is scheduled to begin production in January 1988 and will have a daily production capacity of 34 tons of high-purity argon.

The facility will use cryogenic technology to recover argon from ammonia plants, while returning increased quantities of hydrogen and nitrogen to the ammonia unit.

The new plant, designed and constructed by Cryoplants, is being built next to C-I-L Inc.'s ammonia plants from which Canadian Oxygen will draw feed gas for argon production.

Turkish Aspirin Seen Hurting US

International Trade Commission issued a preliminary ruling last week that imports of aspirin from Turkey may be injuring domestic producers.

As a result, Commerce Department will continue countervailing and antidumping investigations prompted by complaints that several Turkish producers are selling their product in the US at less than fair value.

The investigations were launched after Monsanto Company filed a petition with the government October 31. Monsanto charged that the government of Turkey was subsidizing Turkish producers, giving them an unfair advantage in the US market.

Monsanto also accused the Turkish companies of selling product in the US at unfairly low prices. The complaints are also supported by Dow Chemical Company.

Borden Expands At Fayetteville, N.C.

Borden Chemical Domestic and International, Division of Borden Inc., says it will build a $10 million expansion to its facility in Fayetteville, N.C. The plant produces urea and phenolic resins for the forest products industry.

Borden says the increased capacity is intended to help meet growing demand in the Southeast for resins used as binders in the manufacture of particleboard, plywood and structural board.

Edward E. Barr

Sun Chemical Sells Printing Inks Unit

The largest graphic arts materials company in the world is about to be formed, according to Sun Chemical. It will result from the purchase for $550 million of Sun Chemical Corporation's printing inks and pigments operations by Dainippon Inks & Chemicals, Inc. of Tokyo, Japan. This is thought to be the largest single investment in an American company by a Japanese firm.

Edward E. Barr has been named president and chief executive officer of the reconstituted company, which will retain the Sun Chemical name and operate from headquarters in Fort Lee, New Jersey. Mr. Barr thus returns to the company whose presidency he left in 1982.

In 1986, Sun Chemical's General Printing Ink & Pigments divisions, and its international counterparts, are expected to have revenues in excess of $600 million. For 1987, sales are projected at $800 million, following an anticipated consolidation with other DIC graphic arts materials operations. These include the American printing ink company, Kohn & Madden, and the German ink manufacturer, Hartmann International.

The new Sun Chemical claims it will be the largest company of its kind in North America and Europe and will have a significant market presence in Latin America and Australasia.

Pfizer Inc. Obtains Rights to Additives

Pfizer Inc. says it has signed a licensing agreement that gives it worldwide marketing rights to Polar Molecular Corporation's patented additive for gasoline and distillate fuels. Pfizer also has an option to acquire an equity interest in PMC.

Based in Saginaw, Mich., PMC has focused its research and development activities on products for the automotive and energy-related industries. Its primary product, "DurAlt", a non-metallic fuel additive, was deemed "substantially similar" by the Environmental Protection Agency earlier this year. The action by the EPA means that "DurAlt" can be legally used by refiners to bulk treat unleaded fuel.

"DurAlt", a potential replacement for tetraethyl lead, addresses many of the issues confronting refiners today, including the

Continued on Page 31

Tenneco Unit in Pact

Tenneco Inc. said last week that it has reached agreement with major creditors for restructuring of Poclain SA, French-based manufacturer of hydraulic excavators in which it holds 44 percent ownership. The restructuring, Tenneco said, is expected to enable Poclain to return to profitability through cost-reductions and other operating efficiencies. Under the agreement, Tenneco will issue a new series of reference stock to Poclain's major creditors in exchange for the French franc equivalent of approximately $80 million of Poclain's debt obligations.

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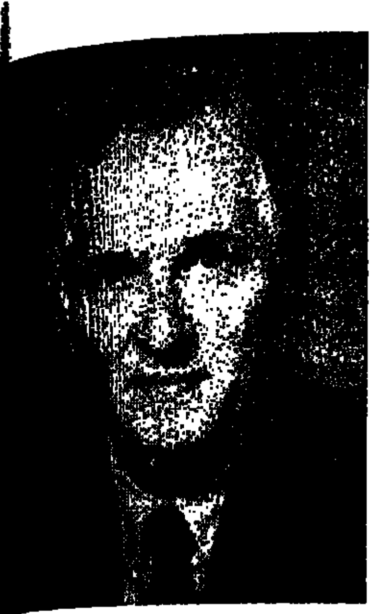

…E. Stafford, president of American Home Products Corporation, who has assumed the additional titles of chairman and chief executive officer. He succeeds John W. Culligan, who will remain as chairman of the executive committee.

Sulfite Warnings Ordered by FDA On Drug Labels

Food & Drug Administration has issued regulations, effective June 3, 1987, to require warning labels for sulfite-containing prescription drugs.

The agency said the warnings are intended to alert prescribing physicians that sulfite preservatives can cause reactions, sometimes severe, in sensitive people.

It has been suggested that as many as 450,000 Americans, mostly asthmatics, may be sensitive to sulfites, FDA said. About 1,000 drugs contain sulfites, which reduce or prevent oxidation, a major cause of product deterioration. Although most are intravenous drugs or injectables, other types of medication may contain sulfites as well.

These new regulations are the third FDA regulatory initiative aimed at protecting sulfite-sensitive people from foods or drugs either by labeling sulfites so they can be avoided or, when labeling does not work, banning sulfites entirely," said FDA Commissioner Frank Young.

Earlier this year, FDA banned the use of sulfites as preservatives on raw fruits and vegetables. Many of the serious reactions and most of the 14 deaths that may have been due

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Waste Firms See Shortage In Capacity

ICF Incorporated, Washington, D.C., says a survey of 17 major commercial hazardous waste management firms indicates that hazardous waste generators expect such a serious shortage of waste treatment and disposal capacity by the end of the decade that they have begun to tie up incineration time and landfill space through 1987 and beyond.

In addition, more and more generators are looking to commercial waste management firms about building and operating treatment and disposal units at the generator's facility and, in some cases, allowing commercial use of the units.

Commercial waste management firms, especially those with incinerators, report that customers without such 'reservations' are likely to face longer and longer waiting periods," says ICF's Geoff Back, who summarized the survey findings in the new report, "1985 Survey of Selected Firms in the Commercial Hazardous Waste Management Industry." Another warning sign of the seriousness of this upcoming capacity shortage is that several commercial firms say they are

Continued on Page 23

Plastics Producers Reach Record Levels In Production, Sales

This year has been another record-breaking one for the plastics industry. According to Society of the Plastics Industry (SPI), which presented 1986 market figures at its annual plastics update in New York last week, resin production and sales have reached record levels for the fourth year in a row.

By the end of the year, total sales of domestic material will have grown by 5.4 percent, well above this year's estimated GNP growth of 2.7, while production will be up 4.7 percent, well above the 2.2 industrial average measured by the FRB index.

Although earlier SPI forecasts of 6 to 8 percent annual growth through the end of the century now seem overly optimistic, says Dave Durand, chairman of SPI's committee on resin statistics, growth of 4 to 5 percent percent should continue through the year 2000.

"Assuming we continue to exceed real GNP growth by a factor of 1.5 to 2," he says, "we should reach the 100 billion pound level shortly after the year 2000." Next year, SPI estimates the market should reach slightly over 52 billion pounds. Weak domestic auto and construction markets, expected to fall by 7 percent and 5 percent, respectively, next year, will contribute to lower growth.

Among the important trends developing in the market this year, Mr. Durand states, are an extended use of blends and alloys, filled and reinforced compounds, increased product specialization, and continuing industry consolidation.

Interplastic competition is also becoming more pronounced, Mr. Durand says, with polystyrene, polypropylene and ABS "nipping away" at some engineering resin market share.

Imports continue to grow at an "uncomfortable, though not alarming rate," says Durand. Imported material is most evident in the LDPE, ABS, epoxy and nylon markets, where it currently accounts for over 5 percent of apparent consumption. Although the average for all resins is only 3 percent of apparent consumption, imports should add up to 1.5 billion pounds this year, over one-third of US exports. Ten years ago, they totalled one-twelvth of exports.

Supply will be a key factor facing the domestic market in the years ahead, as produc-

Continued on Page 17

EVOH RESIN PLANT: Evoh Company of America (a joint venture of Enron Chemical Company of Rolling Meadow, Ill., and Kuraray Company of Osaka, Japan), dedicated this plant in Pasadena, Tex., last week. Its capacity is 22 million pounds a year. Previously, the joint venture imported the product to serve barrier packaging markets from Japan.

Fertilizer Shipments Fall 3 Pct., Production Drops Even More

Domestic disappearance of fertilizer products was 3 percent less for July 1986 - October 1986, compared with the same period of 1985, according to Fertilizer Institute. Disappearance of phosphates was unchanged from the previous period, nitrogen products declined 1 percent, and potash declined 14 percent. In the monthly comparison, October 1986 disappearance was 11 percent less overall than in October 1985.

Production of all fertilizers in October 1986 was 10 percent below that of October 1985. For the year-to-date period, production declined 12 percent, including a drop of 15 percent in nitrogen products, a 3 percent decline in phosphates, and an increase of 19 percent in US production of potash products, the industry group reports.

Ending inventories of fertilizers were lower overall in October 1986, declining 7 percent relative to 1985. Nitrogen and potash inventories declined, while the phosphate inventory increased 13 percent, compared with October 1985.

Fertilizer exports rose more than 3 percent for the July-October period, relative to the same period of last year. Stronger activity in exports of ammonium sulfate, phosphoric acid, and concentrated superphosphate contributed to the overall gains. Imports overall were 1 percent less, but imports of nitrogen solutions and urea continued to show increases.

Disappearance of all nitrogen products except solid urea and nitrogen solutions was less in October 1986, compared with October 1985. For the year-to-date, only urea disappearance increased. Anhydrous ammonia was down 5 percent, solutions down 3 percent, ammonium nitrate solids down 15 percent, ammonium sulfate down 12 percent, and solid urea up 58 percent.

Nitrogen production was 17 percent less for the month and 15 percent less for the year-to-date. Production was lower for all products except solid urea, which increased 1 percent for the month and 9 percent for the year-to-date.

Ending inventories of nitrogen dropped 12 percent, including decreases of 10 percent in nitrogen solutions, 28 percent in ammonium

Continued on Page 17

Toxic Dumps, Gray Market Eyed by Court

The Supreme Court told a Federal appeals court last week to reconsider letting government inspectors enter a complex described as the worst hazardous waste site in Illinois to begin a clean-up effort.

The justices said the 7th US Circuit Court of Appeals should re-study the case in light of the new superfund statute signed into law by President Reagan in October.

The appeals court ruled last year that Environmental Protection Agency may not conduct a survey and preliminary work at an Outboard Marine Corp. facility in Waukegan Harbor, Ill. It is ranked by EPA as the state's worst toxic waste dump.

The 1985 ruling said the superfund program, set up to help pay clean-up costs, does not give EPA officials such access to hazardous waste sites except in emergencies.

But the new version of the superfund law, enacted October 17, explicitly authorizes such EPA access.

The Supreme Court on October 6 had agreed to review the case as decided by the 7th Circuit Court, but government lawyers last month told the justices it would be better to send the case back to the appeal's court.

The lower court could rule that the new superfund law is not retroactive and that EPA's authority was ambiguous under the previous statute.

In another case, the Supreme Court agreed to decide if Customs Service rules allowing importation of "gray market goods" are illegal.

The justices will hear arguments this term in three separate appeals of a ruling by the US Circuit Court of Appeals for the District of Columbia, which said the rules violate Federal laws giving broad protection to US trademark owners.

"Gray market goods" are trademarked products such as fragrances, health and

Continued on Page 22

P-D Earnings Up; Pared-Down Firm In Better Shape

Despite a copper market that has been in a state of collapse since 1981, Phelps Dodge Corporation, one of the world's leading producers, managed to pile up earnings of $50.6 million in the first nine months of this year. The company returned to profitability last year with earnings of $29.5 million.

The turnaround has come about through a series of "belt-tightening, cost-cutting procedures," according to G. Robert Durham, company president, who adds that Phelps Dodge is now "able to withstand almost anything the world's copper market can throw at us." The company has reduced its costs by 40 percent in the last five years.

Mr. Durham told the annual meeting of the Northwest Mining Association in Spokane, Wash., that the driving force behind Phelps Dodge's recovery was "necessity."

The company expanded capacity of the tailings disposal facilities at Tyrone, N.M., at a cost of $5 million, allowing the mine to operate continuously, thereby giving a 40 percent increase in the Tyrone concentrate production.

A $47.5 million solvent extraction electrowinning plant was installed at the site to produce 35,000 tons of cathode copper at a total unit cost, including interest and depreciation, of less than 30 cents a pound.

At Morenci, Ariz., a conversion of the mine from rail to truck mining eliminated the heavy expense of building and maintaining track. Staffing at the company's New York and Phoenix offices was reduced by about 46 percent, saving about $10 million annually, Mr. Durham says.

ELECTS EXECUTIVES: Paul E. Freiman (left) has been elected president and chief operat-ner and Thomas L. Gutshall executive vice-president of Syntex Corporation, effective 1, 1987. Mr. Freiman will be responsible for the company's worldwide pharmaceutical, s and agribusiness operations. Mr. Gutshall will continue to be responsible for managing al diagnostics, chemical and engineering services operations and will join the company's executive committee.

onsanto's Nitro Plant Cited by US Agency

ccupational Safety & Health Admin-ation last week cited Monsanto Com-'s plant in Nitro, W. Va., for 11 al-instances of willfully violating the rnment's record-keeping require-and proposed penalties totalling

has proposed a $5,000 fine for each ected alleged failure to properly main-the required log of injury and illnesses the past two years. The plant employs 0 workers in the production of agri-and industrial chemicals.

spection indicates an ongoing pat-indifference to accurately recording types of on-the-job injuries and ill-s at the Nitro plant," says OSHA chief . Pendergrass. "Without dependable , neither the employer and his em-nor OSHA can accurately gauge the of a plant's safety and health pro-

instances cited by OSHA include sev-types of injuries that required medical ment, restricted work activity or lost days and, in some cases, workers' com-pensation claims, according to Mr. Pendergrass.

The OSHA inspection of the Nitro plant was initiated in June following a worker complaint. The agency has cited the Monsanto plant for record-keeping violations on three separate occasions in the past.

A Monsanto spokesman says the company plans to investigate the 11 instances cited by OSHA and will appeal them if warranted. "The company and the employees acted in good faith," he says. "We give top priority to the health and safety of all our employees."

In a separate action, OSHA cited USX Corporation's coke works' ammonia plant at Clairton, Pa., for 98 alleged willful record-keeping violations and proposed $130,000 in penalties.

The agency cited 60 alleged instances of willfully failing to record cases of lost workdays or restricted work activity, and 38 instances of willful failure to record, or of improperly recording, medical treatment cases.

The citations follow recent similar action by OSHA against several other companies for alleged record-keeping violations.

Oil Fee Is Urged in Study As Imports Hit 5 Million Barrels

ing US dependence on imported oil s a renewed threat to the country's gy and national security, a new Har-University study warned last week. imports are averaging over 5 million rels per day — the highest level since 1 — as lower prices have triggered reases in overall consumption and de-reases in domestic production.

study calls for the immediate imposi-of a $10 a barrel tariff on all imports of il, and a corresponding fee on im-ed refined products, in an effort to re-hese trends.

chemical industry testified against an fee in congressional hearings ear-this year, and the Petrochemical Energy up recently reaffirmed its opposition in ments filed with the Department of En-gy.

t the request of President Reagan, DOE alyzing the national security implications creasing petroleum imports.

he chemical industry argues that raising e price of oil will not increase domestic duction. It says a new fee or tax would ipair economic growth, devastate the in-national competitiveness of the chemical, ers and plastics industries and cost hun-ds of thousands of Americans their jobs.

The Harvard study, co-authored by Harry G. Broadman and William W. Hogan of the Energy and Environmental Policy Center, charges that the market price currently paid for imported oil by US consumers does not reflect the true cost of dependence on insecure sources of oil supply.

"Our proposed fee should be thought of as an insurance policy against the risks of future disruptions from the Middle East," the authors say.

Impositions of a large fixed fee on imports, which would be matched by increases in the price posted by US producers, would reverse the trends in overall consumption and domestic production. The study calculates that the tariff required to bring about an "optimal" level of US oil imports is between $10 and $11 a barrel.

"Rather than advocating protectionism for the US oil industry, what we are calling for is protection for the consumers against future oil shocks," the authors say.

Because the market price of US oil imports does not reflect the total cost, more oil is used by consumers than is optimal, the study notes. Similarly, the amount of oil produced in the United States is less than is optimal.

The Reagan Administration has so far resisted calls for a tariff on the grounds that it would be inconsistent with its free market

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Du Pont to Sell Sodium Silicate Unit

E.I. du Pont de Nemours & Co. last week announced plans to sell its sodium silicates business to Power Silicates Inc., a subsidiary of Power International Limited of Melbourne, Australia. The merchant silicates business, while mature and relatively flat over the past several years, has recently been showing growth potential in a number of areas.

Du Pont's proposed sale includes company patents, technical know-how, marketing information, inventories and manufacturing facilities in Augusta, Ga., Fortville, Ind., and Pineville, La. Du Pont will continue to produce sodium silicates for internal use at its East Chicago, Ind., plant.

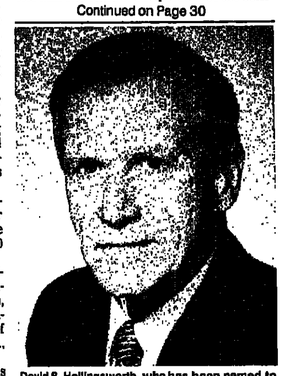
The three plants being sold have a combined capacity of about 70,000 tons per year of anhydrous and liquid sodium silicates. The East Chicago plant can make up to 35,000 tons per year.

Du Pont has internal applications for silicates in the production of its "Ludox" colloidal silica, titanium dioxide stabilization, and the production of silicic acid. The company, through a joint venture with EKA AB of Sweden, is building a plant in Augusta, Ga., that will produce silicic acid.

Du Pont says the sale to Power Silicates is scheduled to be completed by the end of this month. Du Pont will continue to be involved involved in production for at least another six months, however.

Du Pont says sodium silicates represent less than one-tenth of one percent of the com-

Continued on Page 30



David S. Hollingsworth, who has been named to succeed Alexander F. Giacco as chairman and chief executive of Hercules Inc.

Nickel Embargo's End Declared by Sec. Baldrige

The US and the Soviet Union have reached an agreement that is expected to end the embargo on US imports of Russian nickel, says Commerce Secretary Malcolm Baldrige.

Secretary Baldrige announced the agreement in principle with Soviet Foreign Trade Minister Boris Aristov after two days of talks were concluded between members of the joint US-USSR Commercial Commission, a panel set up in the early 1970's to improve relations between the two nations.

The Treasury Department, which administers the embargo, has accepted the Soviet invitation to enter into immedite negotiations with representatives of the Soviet government to work out the specifics of the deal, according to Secretary Baldrige.

The US produces no pure unwrought nickel and is 100 percent dependent on imports.

Secretary Baldrige also says the two sides have agreed to give American companies better access to Soviet enterprises in areas such as chemicals, food processing, iron ore benefication, coal slurry pipelines and irrigation equipment.

"This will not by itself necessarily guarantee US sales, but it will continue the process of improving American access to the Soviet market that we began last year," says Secretary Baldrige.

The secretary says all of these projects will be compatible with US and multinational technology transfer controls. The Soviets are expected to ease regulations which currently prohibit US companies from engaging in joint ventures with state-controlled enterprises.

Secretary Baldrige and Minister Aristov also agreed to hold the next session of the Joint Commercial Commission in Moscow next year.

"I look forward to its contribution to the expansion of our trade and to better US-Soviet relations generally," says Secretary Baldrige. "Both President Reagan and General Secretary Gorbachev feel that trade can be one of the elements leading toward improved relations."

Grace Finds Trichloroethane Has Contaminated Two Wells

W.R. Grace & Co. told the Maryland health department last week that a routine inspection of its Columbia, Md., research laboratory revealed amounts of trichloroethane in excess of Federal environmental standards.

Grace said the tests showed that TCE equaled 50 to 380 parts per billion in two of 13 wells at the facility. Environmental Protection Agency says amounts exceeding 5 parts of TCE per billion are unsafe.

The source of the contamination has not been determined yet, although the company and state and county health officials are investigating. TCE is a cleaning agent primarily used to remove grease from machinery and is one of the more common pollutants found in US waters.

A Grace official said the Columbia wells were free of the chemical when they were checked in September. The wells are tested twice annualy for certain contaminants, and weekly or daily for others.

Local health officials are testing the well water of houses in a surrounding residential area. An initial study of the wells at the research laboratory and the surrounding area indicated that widespread contamination is unlikely because a third well located downhill from the polluted wells showed no traces of TCE.

According to a spokesman for the Maryland Office of Environmental Programs, the state may order Grace to conduct a full environmental inspection of the Columbia facility. The laboratory is the company's headquarters for engineering, biomedical and biotechnical research.

The facility is licensed by the state to store hazardous substances, including TCE.

Chevron Doubling

Chevron Chemical Company announced last week that it plans to more than double the capacity of its normal alpha olefin plant at Cedar Bayou, Tex. The company says it will build a 300-million-pound-per-year facility to be brought on stream in 1990. The unit will be designed to be expandable to 500 million pounds per year.

News Capsule

Gulf Resources Bid

Gulf Resources & Chemical Corporation dropped its bid for Imperial Continental Gas Association last week after UK authorities said the proposed acquisition would be subject to regulatory review that could take up to five months. The company is said to be considering a revised bid, among other options.

Marion Application

Food & Drug Administration has approved Marion Laboratories Inc.'s new drug application (NDA) supplement for 90 mg. and 120 mg. "Cardizem" angina tablets. The company plans to introduce the new dosage forms in the first quarter of next year. The drug is currently available in 30 mg. and 60 mg. tablets.

Amax Consolidates

Amax Inc. says it will consolidate all its research and development activities at its research laboratory in Golden, Colo. The changeover will begin immediately and will involve the gradual movement of research programs currently being carried out at the Ann Arbor, Mich., research laboratory.

PMA Expands Program

Pharmaceutical Manufacturers Association will expand its communications efforts to help the pharmaceutical industry increase public understanding of its products, services and contributions to health-care, the trade group says.

TVA Cuts Work Force

Tennessee Valley Authority plans to reduce its fertilizer plant operating force at Muscle Shoals, Ala., by about 50 workers. The agency is asking for volunteers for early retirement. "The distressed fertilizer market is forcing us to make these cuts," TVA says.

Phibro Plans Investment

Phibro Energy is reportedly negotiating an agreement to become a joint venture partner with Petroquimica Austral of Argentina in a methanol project at Rio Grande, Tierra del Fuego. Phibro Energy, unit of Salomon Inc. in New York, trades in various petrochemicals, including methanol.

Gas Recovery

Production and sale of gas began November 21 at the first landfill gas recovery facility in Texas, it was announced by GSB Energy Inc. The processed methane gas, which is the principal component of natural gas, is being sold to the Houston Pipe Line Co., a subsidiary of Enron Inc. The gas processed at the plant will meet the annual energy needs of 18,000 households in the Houston area.

Harshaw/Filtrol Acquires

The Harshaw/Filtrol Partnership of Cleveland, Ohio, says it has acquired a line of metal finishing chemical products, formulas and trade names from MacDermid Inc. of Bristol, Inc. of Plymouth, Conn. for an undisclosed price. The MacDermid of Bristol products acquired include specialty surface preparation chemicals for the metal finishing industry and will be manufactured, warehoused and sold from the existing facility in Plymouth, Conn. Harshaw/Filtrol says it will employ some sales and technical personnel previously associated with MacDermid of Bristol.

Ogden Acquires

Ogden Corporation says that a newly organized subsidiary Ogden Environmental Services, Inc., has acquired the proprietary circulating bed combustion technology owned by GA Technologies, Inc., of La Jolla, Calif. According to Ogden, this technology incinerates non-radioactive hazardous waste. It has received the first permit issued to private industry by the Environmental Protection Agency under the Toxic Substance Control Act, covering the incineration of PCB's on a nationwide basis.

Armand Hammer

Occidental To Sell Business to Henkel

Occidental Petroleum Corporation has signed a definitive agreement to sell to Henkel Corporation the specialty chemicals business Oxy acquired through the purchase in September of Diamond Shamrock Chemicals Company. Financial terms of the sale to Henkel have not been disclosed.

Completion of the transaction, which is subject to regulatory approval, is expected early next year.

Armand Hammer, chairman and chief executive of Occidental, said the sale to Henkel is part of Oxy's previously-announced program to dispose of assets acquired from Diamond Shamrock that do not fit with the long-term strategy of its chemical business.

In addition to the specialty chemical business, Occidental expects to sell a co-generation facility in Texas, which it would then lease back.

Occidental will continue to evaluate other parts of Diamond Shamrock "to see what doesn't fit," the company said last week.

Dieter H. Ambros, chairman of Henkel, said the specialty chemicals business makes an "ideal fit" with his company, saying it will "significantly strengthen the present $288 million annual sales of Henkel Corporation, the US operation of Henkel KGaA, by providing a broad marketing and service organization to accelerate the transfer of Henkel's European-based expertise in applied chemistry into the US."

The specialty chemicals business, based in Morristown, N.J., supplies products to the pulp and paper, textile, paint and coatings, leather, construction and agriculture industries. The business has worldwide sales of approximately $160 million.

The operations consist of five manufacturing plants in the US and foreign operations in Canada, the UK, Norway, France, Spain, Taiwan, Australia, Japan, Italy, Mexico and Colombia. The business has approximately 1,100 employees worldwide, with 750 located in the US.

Henkel's parent company, based in Dusseldorf, West Germany, is a multinational producer of consumer products and specialty chemicals, with sales in excess of $4 billion.

OxyChem, the chemicals operations of Occidental, produces industrial and specialty chemicals, plastics and resins, and agricultural products. OxyChem operates more than 50 manufacturing plants with more than 12,000 employees, and has annual sales in excess of $2 billion.

Cyanamid Sees Steep Increase In Net Earnings

American Cyanamid Company is projecting earnings from continuing operations and net earnings for 1986 in the range of $4.30 to $4.35, an increase of more than 70 percent over earnings from continuing operations a year earlier.

In a presentation to the financial analysts of Philadelphia, George Sella, Cyanamid's chairman and chief executive officer, said that worldwide sales are expected to be approximately $3.82 billion, an increase of about 8 percent over sales of $3.45 billion in 1985.

Mr. Sella said that as a result of extensive restructuring of the company, approximately 75 percent of operating earnings in 1986 will come from the company's agricultural and medical operations.

Operating earnings of the medical segment are expected to be approximately $175 million, up 23 percent from $145 million last year, while worldwide sales are expected to increase 23 percent from $1.167 billion to $1.437 billion.

3M, NASA To Conduct Tests in Space

3M Company and the National Aeronautics & Space Administration plan to conduct 62 materials processing experiments over a 10-year period aboard the space shuttle. The experiments will be in the areas of organic and polymer science.

Under an agreement signed this month, any material produced or process developed will be for research and development purposes, with NASA and 3M as co-equal, "cooperative participants."

The agreement further states that it is the "intent of both parties that any promising results arising from this joint endeavor will result in commercial production and sales.

NASA says it will schedule the 3M experiment flights on a "space available" basis. Assignment of specific experiment flights will be contingent upon negotiation of individual task agreements.

The agreement calls for two experiments each year in the shuttle orbiter middeck over a 10-year period, two experiments a year in the cargo bay during the first three years of the agreement, and six experiments a year in the cargo bay from the fourth through the ninth year of the agreement.

'Contac' Makes Comeback

SmithKline Beckman Coporation's "Contac" cold medication more than regained its market share after a five-month absence from retail shelves, the company said last week.

Disclosing results of a survey conducted by A.C. Nielsen Company, SmithKline Beckman said "Contac" accounted for approximately 11.8 percent of the US cold medicine market in September and October, compared to 8.7 percent before the product was withdrawn from the market in March because of tampering. The product was reintroduced in August.

According to the Nielsen survey, "Contac" ran even in terms of market share with Burroughs Wellcome Company's "Actifed", while "Sudafed", another Burroughs Wellcome product, captured 11.3 percent of the cold medicine market, followed by A.H. Robins' "Dimetapp", with an 8.1 percent market share.

Burroughs Wellcome and Robins declined to comment on the survey results, both saying they hadn't seen the survey itself. As a rule, the firms added, they do not comment on market share.

In addition to "Contac", SmithKline Beckman also removed its "Teldrin" allergy medication and "Dietac" diet medicine in March. The company spent $50 million on the recall of the products and the reintroduction of "Contac" and "Teldrin". The company decided to drop "Dietac", which it describes as a "very minor" product.

Most of the recall and reintroduction costs were attributed to "Contac", which is now available in capsule, caplet and liquid form. "Contac" sales in 1985 totaled $60 million in the US.

Ampacet Europe Starts Up Belgian Plastics Additives Plant

Ampacet Europe has formally put on stream a new plastics color and additive production plant at Messancy in Southern Belgium.

When the new facility is fully operational, (in January, 1987) it will have the capacity to produce 20,000 tons of product a year and room for incremental expansion to 30,000 tons. To date Ampacet has spent $17 million to build the new facility. Construction started eighteen months ago.

According to David Weil, president of Ampacet, the company already has 65,000 tons of capacity at three plants in the US specializing in polyolefins and some engineering resins. In addition to the new plant in Europe, Ampacet is planning to construct a new plant in Ontario, Canada next year.

Mr. Weil says that manufacturing requirements in Europe are somewhat more demanding than is normal in the US, and that the experience gained at Messancy will be used to upgrade the company's North American manufacturing techniques.

He predicted that during the next three years Amapacet will double its worldwide sales.

Explaining the decision to build a production unit in Europe, Mr. Weil noted that Ampacet has been serving the market there for twenty-five years, through a network of exclusive distributors. He cited the disruptive fluctuations in the value of the dollar as one reason for building a plant there. Another was a desire to get closer to raw material sources. A third was the need to be closer to customers. The company will continue to

Continued on Page 24

AMPACET EUROPE: The four silos of the company's new production facility at Messancy in Southern Belgium.

OILS, FATS & WAXES

Palm Oil Pricing Suffers From Lack of Consumer Interest

Palm oil pricing is slipping as Malaysian producers are beginning to respond to the slackened interest seen in the world market. Despite the weakening price, consumers are continuing to stay out of the palm oil market.

From late October through the first days of December, RBD palm oil prices mostly hovered between 16 and 16½ cents per pound, seldom deviating from this range. For the past two weeks, though, palm's position noticeably faltered, undermining the stability seen in that market for the previous six weeks.

The initial rise in palm oil pricing was said to be partly the result of speculation that India would be needing large quantities of vegetable oil, presumably palm. Instead, Indian buyers took soybean and rapeseed oil positions, and bought palm only irregularly for that.

Now India's activity is thought to be the main reason for the current decline in price. India is said to be trying to re-sell some of its vegetable oil stocks to the world market. It has overbought on soybean and rapeseed oil, and numerous sources report that India is actively seeking buyers for these oils.

RESALE THREATENED

"They're threatening to re-sell palm oil as they occasionally do," says an industry source, who notes that it remains to be seen if India will do so. What is clear, though, is that India, once of the largest world buyers of palm oil, has not made any purchases in recent weeks, signalling the Malaysians that they need to make a move to boost sales.

In addition, Malaysian producers are seeing that US buyers have also cut palm oil consumption. Since the latest price rise in October, US oil consumers have shied away from palm, to the point where many companies were re-selling their forward palm oil positions and filling their oil needs with less expensive domestic soybean oil.

Palm oil stocks in the US at the beginning of November totalled 58.6 million pounds, down from the figure one month before of 71 million pounds.

The present fall in price has not yet induced US consumers to come back into the palm oil market, according to industry sources. "People who sold off old positions (two weeks ago) are not ready to buy new ones," says a trader.

Referring to the "holiday doldrums," sources say that vegetable oil buyers are standing pat, apparently satisfied with their current supply levels.

Market players are not expecting the price of palm oil to firm in coming weeks. As Malaysian producers continue to try to win back business from an indifferent market, pricing is expected to remain weak. "The general feeling is that (the price) will drop a little further," says a source, who voices doubt about the prospects of increased business for the Malaysians any time soon.

VEGETABLE OILS

COTTONSEED OIL — The latest rise in price on this oil seems to be holding firm, despite the lack of consumer interest seen in the market lately. The price has been climbing since October, when the price started out at 14½c. per pound. Now, two months later, it is close to 18c. per pound, and not expected to weaken appreciably anytime soon.

The most recent increase in the pricing was due largely to dealers having difficulty covering their short sales. Sales were made weeks or months ago based on expectations of more availability of oil than actually appeared on the market. Consequently, dealers had to scramble for the scarce material, pushing the price up, according to an industry source.

The shortness of supply is due partially to the government's reduced cotton acreage program, and also to weather-related problems with cotton yield this year. Because of this, some crushers are said to be going on a 10/4 schedule, running for 10 days and shutting down for four, instead of the usual seven-day a week running schedule. In this way cottonseed crushers are hoping to stretch their production period for longer than they might otherwise be able to do.

PEANUT OIL — The market for this oil has been trading down lately from previous levels, reflecting the relative lack of interest that has been seen for peanut oil. One trader explains the drop in price by saying, "We went for a good period without any trading at all to indicate a (price) level — when the market came back it was at a lower level."

The decline in consumption is attributed to the usual end-of-year slack in demand in the oils market. Also a factor is the rather heavy buying that took place in the latter part of November, which allowed buyers to round out their stocks for the duration of the year, says a source.

Previously the price had been rising fairly rapidly, with some players speculating that it might become even with the price of imported peanut oil, which generally serves as a cap on domestic oil pricing. Because of the high prices that have been seen in this market, export business has been non-existent, a

PRICES TRENDLINES

WEEK ENDING DEC. 12, 1986

CHANGES/UP

Grease, white, choice, tanks, dlvd, NY, 1¼c. per lb.
Grease, yellow maximum 10%, ffa tanks, 1¼c. per lb.
Lard, loose, bulk tanks, Chicago dlvd, ½c. per lb.
Palm oil, NY, ¾c. per lb.
Tallow, inedible, fancy, tanks, dlvd, NY, 1c. per lb.
Tallow, inedible, bleach, tanks, dlvd. NY, 1c. per lb.

CHANGES/DOWN

Coconut oil, NY, ¼c. per lb.
Peanut, 50% bulk, SE, $10 per ton
Peanut oil, Southeast (restricted), 1c. per lb.
Soybean, 44% bulk, Decatur, $16.80 per ton
Soybean oil, Decatur, 1.04c. per lb.

OILS, FATS INDEX

The Oils, Fats & Waxes index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

Dec. 12, 1986	79.50
Dec. 5, 1986	85.83
Nov. 14, 1986	81.81
Dec. 13, 1985	87.94

Chemical Prices Start on Page 38

FRIDAY SPOT PRICES

MARKET CLOSE DEC. 12, 1986

CRUDE VEGETABLE OILS		
Coconut oil, NY	lb.	.21
Coconut oil, Pacific	lb.	.NA
Corn oil, Midwest	lb.	.21¼
Cottonseed oil, Valley	lb.	.18
Cottonseed, Minneapolis	lb.	.25
Palm oil, NY	lb.	.16
Peanut oil, Southeast (restricted)	lb.	.27
Soybean oil, Decatur	lb.	.1413
REFD. VEGETABLE OILS		
Corn oil, Ltr., NY	lb.	.26
Corn, jumbo tanks	lb.	.30
Cottonseed oil, jumbo tanks, NY	lb.	.28
Peanut oil, jumbo tanks, NY	lb.	.3280
Soybean salad oil, NY	lb.	.1906
OILMEALS		
Cottonseed, 14% bulk, Memphis	ton	$180
Linseed, expeller, 34% bulk, Fargo	ton	$110
Peanut, 50% bulk, SE, Alabama	ton	$180
Soybean, meal, 44% bulk, Decatur	ton	$147.10
FATS & GREASES		
Grease, white, choice, tanks, dlvd., NY	lb.	.13
Grease, yellow maximum 10% ffa tanks	lb.	.11¼
Lard, loose, bulk tanks, dlvd., Chicago	lb.	.14
Tallow, inedible, fancy, tanks, dlvd., NY	lb.	.14½
Tallow, inedible, bleach., tanks, dlvd., NY	lb.	.14¼

OILS, FATS & WAXES

condition not expected to improve in the near future.

RAPESEED OIL — The price of this oil is quoted at 52½c. to 56½c. per pound, in drums, with one dealer suggesting a stronger price range of 54½c. to 58½c. per pound. Business is said to be brisk on both high and low erucic acid varieties. Domestically, "Business is good, people are buying it — our business is growing," says an industry source.

Dealers in the US are continuing to complain about the inexpensive, low-quality rapeseed oil of varying acid content seen here and in Europe. "We are still shipping material to Europe," says a source, "but that cheap material is playing havoc with the European market."

North American high erucic acid rapeseed oil is said to be running at acid content levels of 50 percent to 54 percent. The low erucic material, meanwhile, is said to be growing in popularity, largely as a result of the move to rapeseed made a few months ago by a major buyer of vegetable oils. "Interest (in low erucic acid rapeseed oil) is growing rapidly. Procter & Gamble did nothing but help its implementation in the US," says a source.

TUNG OIL — The price of imported tung oil in New York is quoted between 31c. and 33c. per pound, in tanks. The market for the oil is described as steady, with demand at normal levels. "The market is very horizontal," says an industry source. No change is expected in the market until next month when higher prices tend to be seen, says a source, who notes that rumors of a short crop should be confirmed or proved wrong at that time.

FISH OILS

MENHADEN OIL — The price of menhaden oil is quoted at 12c. per pound on the Atlantic Coast for crude material in tanks, works. The price at Gulf ports is quoted at 13c. per pound, same basis.

Supplies are said to be holding up, despite the fact that production season in the US has ended. "Producers inventoried enough oil to meet demand," says an industry source, who notes that demand is "fairly good" at present.

There is said to be very little European interest in US menhaden oil because of large purchases recently made from Japan. Japan made an aggressive move downward in price, says a source, allowing them to sell heavily to European buyers.

Limited inventories have temporarily slowed sales from Japan, though, with the recent sales to Europe expected to be their last for a while. "The Japanese have just about taken themselves out of the market — their offers are few and far between," says a source, who notes that tight supplies will probably lead Japan to raise prices when they do begin selling again.

Color Additives Okayed by FDA

Food & Drug Administration has issued a final rule, effective January 5, permanently listing color additives Red 8 and 9 for use in coloring ingested drugs and cosmetic lip products, as well as externally applied drugs and cosmetics.

The agency says it concluded these uses of the colors are safe. The action marks the first time FDA has applied the *de minimis* policy to an ingested use of a color additive.

Earlier, the agency permanently listed Yellow 6 for use in foods, drugs and cosmetics. Because the color may cause an allergic reaction in a small segment of the population, foods and drugs which are administered orally or nasally must declare the presence of Yellow 6 on their labels.

The agency said there are no reports of reactions to the chemical from external application.

Reds 8 and 9 may be used in externally applied cosmetics in amounts consistent with good manufacturing practices. In ingested cosmetic lip products, the colors may be used in concentrations up to 0.1 percent by weight of the finished product.

Cosmetics, Toiletry & Fragrance Association, the petitioner for the color, had requested that lip products be allowed to contain the colors in a 2 percent concentration.

Shintech's K-Bin

Continued from Page 3

sents "the first step in Shintech's planned diversification in the US, building on Shintech's success in producing and marketing high-purity PVC resins."

"The new K-bin plant will produce 20 million pounds of PVC compounds per year initially, and has been designed to allow for substantial expansion," Kanagawa states. Based in Freeport, Tx., the facility will produce compounds using technology drawn from Shintech's parent company in Japan, Shin-Etsu Chemical Company Ltd. The company says that Shin-Etsu's strength in polymer science should give K-Bin "an unusual ability to provide profitable technical assistance to its customers."

Joseph L. Brawner, president of K-Bin, previously served as director of Manufacturing for Shintech's Freeport PVC plant.

AROMATIC ORGANICS

Maleic Balance

Continued from Page 3

pounds and consumption reaching approximately 397.5 million pounds. MA producers say that the market this year has been on the tight side, due in part to two production outages during the first half of the year.

"There was pressure created by those problems," says one producer, and although plants are back to more or less normal operations," he believes that effects of the tightness could carry over into next year.

Some maintenance in the industry has been deferred, says this producer, pointing to a rival who had been expected to take a turnaround in the Fall. Catalyst changes in the industry next year along with two weeks more of downtime needed by Denka to tie in its new capacity should keep the market fairly well in balance, says another producer.

The other producer concedes that supply and demand are "a little more comfortable now" that all units are operating fully, and observes that business during the first quarter tends to be on the slow side.

The market "could get a little sloppy during the first part of the year," depending on how actively buyers build inventories in anticipation of the usual business pickup in the Spring, he says.

Producers report some year-end competitive price posturing, but say it is to no extent out of the ordinary. "Any good purchasing agent will talk up a price decline" during contract negotiations, says one producer, but despite "one or two excursions" to meet competitive situations, "there is stability in the market, and we feel pricing should stay where it is" even though feedstock butane costs have been weak.

PRICING FIRM IN '87

Another producer concurs that pricing is fairly firm going into the new year. "We have had a strong stance, and see no reason for prices to deteriorate when you've got a sold-out plant," he says.

List pricing in the industry is 53 cents per pound, and producers agree that discounting off that level, on an order of 5 to 10 percent, has been fairly steady the past several months.

"After several years of poor profitability, the maleic market has turned around," comments one producer. It is observed that pricing "has gotten away from being feedstock-driven (and towards) the value of the product in the marketplace."

The polyester resins market accounts for just over half of the maleic anhydride consumed, and is expected to grow at a 4 percent or slightly higher annual rate. Major polyester resin applications include automotive, marine, and construction industries.

The other major markets for maleic anhydride are lube oil additives (11 percent of demand), fumaric acid (10 percent), and agricultural chemicals (8 percent). These applications are seen as more mature, and one producer estimates a growth rate of only 1 percent per year for the lube oil and agricultural sectors.

It is noted that a locust outbreak in 1985 temporarily pushed up demand for the herbicidal application. One producer notes that some specialty areas have shown a fairly strong growth rate.

With the overall market expected to be fairly snug for the balance of the decade, producers who have not announced expansion plans say they are well aware of the situation.

"Our plant is expandable," says an Ashland Chemical Company spokesman, and "though we are not immediately studying an expansion, we are assessing the market in view of the others' " actions. Aristech Chemicals Corporation says it is "looking at ways to optimize our business."

Looming over the market, however, is the potential construction of a 200-million-pound-per-year facility for Standard Oil Chemical Company (CMR, 11/17/86, pg. 3). Should the facility be built, it is estimated that about half the MA would go as a feedstock into 1,4-butanediol production, with the other half going onto the merchant market.

PRICES TRENDLINES

WEEK ENDING DEC. 12, 1986

CHANGES/UP
None

CHANGES/DOWN
None

AROMATICS INDEX

The Aromatic Organics index reflects the prices of 14 representative materials in this sector and the quantity of each produced in 1985.

Dec. 12, 1986	167.84
Dec. 5, 1986	167.84
Nov. 14, 1986	167.84
Dec. 13, 1985	167.84

Chemical Prices Start on Page 36

BTX — Industry sources report that Exxon Chemical Americas has followed Shell Chemical Company's move on benzene contract pricing to 98c. per gallon. Exxon's new price, up 6c. per gallon from 92c. per gallon, reportedly is effective December 16. It is said that most other producers have moved in kind.

Standard Oil Company has held to its policy of not making mid-month adjustments in pricing. "The message we gave at the beginning of the month (95c. per gallon) was the correct call for the month," says a company spokesman, who observes that Shell and Exxon's average price for the month will equal the Standard Oil price.

For the month, "they have met our price, so there is no need for us to move," says the source, adding that the company continues to see "a value in consistency" in pricing.

The spot benzene market's firming trend

AROMATIC ORGANIC OUTPUT

US INTERNATIONAL TRADE COMMISSION NUMBERS POUNDS/GALLONS.

		3rd Qtr. 1986	9 months 1986	9 months 1985
Aniline	lb.	194,750	598,502	565,421
Benzene	gal.	358,510	1,024,749	1,046,915
Bisphenol-A	lb.	206,119	617,588	606,980
Creosote oil, dist. as such (100% basis)	gal.	—	—	—
Cresylic acid, mixed cresols	lb.	30,078	71,035	65,461
Cumene	lb.	948,332	2,669,394	2,533,929
Cyclohexane	lb.	461,047	1,573,522	1,359,046
Ethylbenzene	lb.	2,291,051	6,568,680	6,437,661
Maleic anhydride	lb.	87,560	260,888	284,448
Phenol, syn.	lb.	698,246	2,149,270	2,112,910
Phthalic anhydride	lb.	224,240	651,378	632,456
Styrene monomer	lb.	1,966,051	5,775,030	5,565,277
Terephthalic acid, dimethyl ester	lb.	2,051,214	5,737,368	5,324,052
Toluene, all grades	gal.	209,522	570,571	524,562
Toluene 2,4- and 2,6- diisocyanate	lb.	164,003	489,985	473,370
Xylene, all grades	gal.	203,173	567,262	553,914
o-Xylene	lb.	214,182	564,784	531,579
p-Xylene	lb.	1,319,090	3,789,902	3,474,890

(1) Partly estimated.
(2) Revised.
(3) Totals may not equal the sum of the monthly figures due to fiscal year revision.

AROMATICS

held course last week, as the price reached the $1.00-per-gallon-level. Market sources point to production outages in recent months and strong styrene demand as prime factors in the market.

It is noted that Shell has resumed normal operations at its Deer Park facility which experienced a mechanical problem around the end of November.

A trader attributes Shell's need to buy substantial amounts of material in recent weeks in part to its supply arrangement with Huntsman Chemical Corporation. It is said that Shell had been storing up benzene for several months prior to the final settlement of Huntsman's acquisition of American Hoechst's styrene business in March. "It has come to light this month," says the source, that Shell "has worked off their cushion."

The spot toluene market was quoted last week at 69c. per gallon, unchanged from the week before. Spot xylene was said to be holding fairly steady between 78c. and 80c. per gallon.

Orthoxylene spot pricing was quoted last week at 13¾c. per pound, a price that has stabilized in recent weeks after a firming trend. There is some tightness in the market, says one producer.

The paraxylene spot market was quoted last week at 16½c. per pound. Downward pressure on pricing in recent months has been related to the startup of two Japanese facilities, one last month and the other next April. "Contract posturing for '87 has excluded some US producers," says one, and it is noted that one major producer has proposed a 17½c. per pound price for the first quarter. Contract pricing this quarter has been 19c. per pound.

CUMENE — Producers have reported higher pricing this month in response to rising benzene costs. Last month's pricing was reported between 14½c. to 14¾c. per pound.

One producer said pricing for the first half of December was 15c. per pound, and for the second half of the month will be 15½c. pe pound.

Another producer reported a first-ha price of 15.20c. per pound, and said that h expected to face some competitive pressure at that level. A third supplier observed range of pricing the first half of the mon between 15c. and 15¼c. per pound.

Cumene producers observe that they ha encountered a surge in European demand material in recent months. According to B reau of Census figures, total US exports the three-month period ending November were 90 million pounds, while the total for of 1985 combined with the first seven month of 1986 was 57 million pounds.

CYCLOHEXANE — In accordance wit the industry-wide pricing formula, the fo per-gallon mid-month benzene contract price hike translates into a 4.125c.-per-gallo increase in cyclohexane pricing to a level of $1.09150 for most producers. At least on producer's posting is 1c. per gallon lower.

NAPHTHALENE SULFONIC ACID — American Hoechst Corporation says it will raise the price of its "Coupler 1" 2,3 dihydroxy-naphthalene-6-sulfonic acid sodium salt by $1.00 per pound, effective January 1.

The new price will be $9.75 per pound, f.o.b. warehouse, up from $8.75 per pound. The company attributes the increase primarily to higher raw material costs. The product is said to be used principally in the reprographics industry.

PHENOL — BTL Specialty Resins Corporation says it is making an adjustment to its January 1 price increase. As previously announced, selling prices were to move up 4c. per pound, less a 2c. per pound temporary voluntary allowance (TVA).

BTL now says its price increase will be 4c. per pound less a 1c.-per-pound TVA. The company attributes the adjustment to higher benzene costs.

STYRENE — Dow Chemical USA says it is restructuring its styrene monomer pricing. List pricing changes from 26c. per pound to 30c. per pound with a 4c. per pound temporary voluntary allowance. The new price is effective January 1.

Oil Fee Urged

Continued from Page 7

policies. However, the study indicates that there are already market imperfections associated with U.S. oil imports that are not captured by current prices.

For example, because the United States is such a large purchaser, the report suggests, the price paid for foreign oil is not independent of how much the country imports. In particular, the greater the volume imported, the higher the price, and vice versa. Importantly, this means that a given increase in US demand for oil imports leads to a higher price for all pre-existing importers must pay.

Reducing the level — and cost — of imported oil will result in a real saving for the United States, although, the authors admit, redistributing resources throughout the economy will have "winners" and "losers."

However, the authors argue that the gains enjoyed by the "winners" are larger than the costs suffered by the "losers." Therefore, the tariff will produce positive net benefits for the nation as a whole.

The study considers various tariff instruments, including a variable fee designed to establish a floor price, and concludes that the oil fee is the most sound option. The authors also reject the granting of special exemptions to particular countries.

Meanwhile a US oil industry executive warned last week that the nation is facing an oil crisis that will effect "everyone in this country — not just the domestic oil and gas industry."

ALTERNATE ENERGY NEEDED

Addressing an oil and gas symposium sponsored by Arthur Andersen & Co., Dr. Ray Irani, president and chief executive officer of Occidental Petroleum Corporation, said he believes that the most serious issue facing the industry is the need to start developing new, alternate energy sources in order to avert the oil crisis that will come if US dependence of foreign oil is not reduced.

Dr. Irani predicted that by the mid-1990's, the Organization of Petroleum Exporting Countries will have complete control of oil production and pricing.

US dependence on imports, he said, will increase as the domestic oil producing industry shrinks and demand grows. He noted that OPEC's market share has increased 20 percent in the past year alone and that the oil price per barrel could hit $60 by the year 1990.

Another factor contributing to OPEC's future dominance, Dr. Irani said, is that the Communist-block nations will become net importers of crude oil, competing with Western nations for OPEC oil.

The only solution to this impending crisis, Dr. Irani said, is for the United States to establish and commit to a program designed to achieve energy independence. The first step is to make everyone aware that the US is vulnerable to supply disruption and dollar crisis. "It's very disconcerting that as soon as it becomes cheap we again conveniently forget about energy independence," Dr. Irani remarked.

Sulfite Warnings

Continued from Page 5

sulfites were linked to restaurant foods, especially salads, FDA said.

At the same time, regulations were issued requiring that sulfites be labeled when used in small amounts for baking and other food processing if any sulfites are detectable in the final product. These regulations will become effective January 9, 1987.

A label statement was already required when sulfites were added as preservatives in packaged goods.

The new warning for prescription drugs will state the specific type of sulfite used and advise that it may cause allergic-type reactions, especially severe asthma attacks, in susceptible individuals, particularly asthmatics. The statement will be required to appear in the "warnings" section of the drug labeling and leaflets that go to physicians and pharmacists.

Sulfites are a group of chemicals used in some drugs and foods to retard spoilage. Besides being used in injectable drugs, such as antibiotics, local anesthetics and corticosteroids, sulfites are also used in some inhalant solutions and ophthalmic preparations.

FDA said not all of these types of drugs contain sulfites as preservatives, and relatively few oral drug preparations are preserved with them. Sulfites are not present in metered-dose inhalation preparations.

The incidence of reactions to sulfites is not known, according to FDA, but in 1981 reports of hypersensitivity to sulfites in drugs began to appear in medical literature. Since that time, in addition to the literature reports, FDA said it has received more than 40 reports of possible sulfite reactions that may have been associated with the use of prescription drugs.

Although no serious problems have been reported with non-prescription drugs preserved with sulfites, manufacturers have initiated a voluntary program to list such inactive ingredients on product labels.

Nearly all injectable epinephrine preparations used in treating severe allergic reactions contain sulfites. Because a delay in the administration of epinephrine might be dangerous, the sulfite warning statement for the drug has been modified to reflect this.

Chemical Finance

Allied–Signal Selling Businesses

Allied-Signal, Inc. wants to sell seven operating units with total sales of about $1.5 billion, and comprising the majority of the businesses in its electronics and instrumentation sector. The businesses to be sold are: Ampex Corporation, Amphenol Products, Linotype Group and the engineered components group businesses, including MPB Corporation, Neptune International Corporation, Revere Corporation and Sigma Instruments, Inc. Allied-Signal expects to complete the sale of all of the operations by mid-1987.

Morgan Stanley & Co. has been retained to assist with the sale of the Linotype Group, Lazard Freres & Co. with Amphenol Products, and First Boston Corporation with Ampex Corporation and the engineered components group.

Edward L. Hennessy, Jr., Allied-Signal's chairman and chief executive officer, says the company has decided to sharpen its focus on its three main businesses: aerospace, automotive and engineered materials, including the electronics capabilities in those core areas.

BASF Slates '87 Spending

In line with a five-year $1 billion capital expenditure program, BASF Corporation expects to invest $240 million in 1987, up from $230 million this year. Major '87 projects include plants for the production of specialty amines and polytetrahydrofuran, as well as an expansion of tetrahydrofuran capacities, all underway at Geismar, La. (CMR, 12/8/86, pg. 9). About 50 percent of the 1987 capital spending will be devoted to cost and efficiency improvements.

The company has completed several projects in 1986, including a doubling of acrylic acid capacity at Freeport, Tex., an expansion in butanediol capacity at Geismar and opening of a new agricultural research center near Raleigh, N.C. The company's sales in 1986 are expected to total $3.5 billion and overall corporate sales in North America, including Wintershall and Canadian chemical operations, should top $3.9 billion, the company says.

Asarco to Purchase Kennecott Subsidiary

Asarco Incorporated, New York, has reached an agreement with Kennecott Corporation to purchase the Missouri assets of Kennecott's Ozark Lead Company Division. Kennecott is a wholly-owned subsidiary of Standard Oil Company.

Ozark Lead, located in Southeastern Missouri, comprises a lead mine and concentrator with an annual capacity to produce approximately 100,000 tons of lead and 3,000 tons of zinc in concentrates.

The mine has ore reserves of 23 million tons, with average grades of 5.3 percent lead and 0.5 percent zinc. These reserves are sufficient to support production at capacity for 15 years.

Union Carbide Tender Offer Succeeds

Union Carbide Corporation has received, through a successful tender offer, all the necessary consents to proposed amendments to the indenture to certain senior securities issued during its defense against an attempted acquisition by GAF Corporation.

Carbide said that it has received tenders (including guaranteed deliveries) of approximately 96 percent of the aggregate principal amount of its 13¼ percent senior notes due 1993, 14¼ percent senior notes due 1996 and 15 percent senior debentures due 2008, pursuant to its offers to purchase all of such securities.

The amendments restore to Union Carbide most of the financial flexibility it had before the debentures were issued.

Union Carbide said late in the week that it has accepted for payment all the securities that were tendered.

Exxon to Sell Reliance Electric

Exxon Corporation has entered into a letter of intent to sell Reliance Electric Company and other companies managed by Reliance to a consortium comprised of the management of Reliance, Citicorp Capital Investors and Prudential-Bache Securities for $1.35 billion. A definitive agreement is expected in late December.

Exxon estimates that the sale will result in an after-tax gain of $275 million. Reliance, a manufacturer of motors and other electrical communications and weighing equipment, was purchased by Exxon in 1979 at a cost of $1.236 billion.

Among the companies under Reliance's management are Gilbarco Inc., a manufacturer of pumps, measuring devices and service station dispensing equipment.

John Morley, who has been president and chief executive of Reliance since 1981, and other key personnel will remain in their positions in this leveraged buyout.

Chevron Expects $320 Million Charge to Income

Chevron Corporation, San Francisco, expects to record charges of approximately $320 million against its 1986 four-quarter net income, reflecting a decline in the value of oil and gas properties because of the worldwide steep decline in oil prices. The charges relate primarily to wells in progress where development is no longer economic under present conditions, a spokesman for the company explains.

Chemical Financial Briefs

Revlon Group Incorporated has completed the sale to **Johnson & Johnson** of the intraocular lens and certain related businesses of **Revlon's Frigitronics, Inc.** subsidiary for approximately $100 million . . . **Biotechnica International, Inc.**, will seek a new collaborator to engineer *Rhizobia* bacteria for use as soybean seed inocula when its current contract with **EniChem Agricoltura SpA** expires in April 1987.

The AAA-rated senior debt of five units of the **Unilever Group** have been placed on Standard & Poor's Corporation's *CreditWatch* with negative implications due to Unilever United States, Inc.'s announced friendly acquisition of **Chesebrough-Pond's, Inc.**, for $3.1 billion . . . **Gulf Resources & Chemical Corporation**, Boston, Mass., has terminated its $970 million bid for **Imperial Continental Gas Association**, London, because the offer was referred to the British Monopolies & Mergers Commission by the Department of Trade & Industry.

Ethyl Corporation is offering $150 million of its 9⅛ percent debentures due December 15, 2016 at 99.55 percent of their principal amount to yield 9.42 percent. First Boston Corporation, Goldman, Sachs & Co. and Scott Stringfellow, Inc. are co-managing.

Plastics Producers

Continued from Page 5

ers continue to draw down inventory. In most large-volume plastic markets, Mr. Durand explains, production is currently exceeded by demand, and the average inventory levels have fallen from 35 days to 30 days. If this trend continues, Mr. Durand asserts, supplies of commodity plastics may tighten considerably.

The largest market for plastics in the US continues to be packaging. SPI estimates that this use accounts for 27 percent of all plastic resins sales. The fastest growing market segment, however, is building and construction, which currently comprises 21 percent of the market.

This growth, attributed to increased sales of pipe and conduit, plumbing fixtures, siding, windows, doors and insulation, may outstrip that of packaging in the future, although this will depend on the health of the construction industry and the effectiveness with which plastics producers face environmental and toxicity and product liability issues.

Another striking growth area is reselling and compounding, grouped by SPI into "other domestic sales;" demand for plastic compounds, many of which go into automotive applications, has doubled since 1976.

The brightest spots in the market this year have been polypropylene, PVC, polystyrene and HDPE, which grew by 8.9 percent, 8.6 percent, 6.7 percent and 5.2 percent, respectively. Lower growth for LDPE this year is attributed to a continuing shift toward use of linear low-density material and a tendency toward thin-walling and downgauging in several blow molding applications.

EXPORTS ARE STEADY

Although the US export percentage for plastic resins has not changed significantly in the last 10 years, export markets were strong this year. Polypropylene exports reached particularly dramatic levels, over 19 percent of total sales and use. Similarly, HDPE exports were up, at 12.6 percent of total sales. The trade deficit for PVC was reversed this year, as exports exceeded imports by 1.5 percent.

Major environmental issues will continue to affect the plastics industry, and future success will depend on producers' effectiveness in communicating with government agencies and environmental groups.

According to Charles O'Connell, president of SPI, a more open constructive link must be forged with traditional "adversaries." In the area of solid waste management, SPI expects to see a significant amount of legislation, particularly involving bottle coding, bottle deposit and forced recycling.

SPI, in conjunction with soft drink, packaged and grocery product manufacturers, has been working to found COPE (Council of Plastics Packaging and the Environment) to effectively deal with the solid waste issue. Marine pollution, hazard communication standards and workers' right-to-know laws are other important areas, as will product safety.

Combustibility and toxicity are now another area of concern, says Mr. O'Connell, especially now that New York state has voted to continue using small-scale tests to determine plastic toxicity in residential construction.

The industry, he says, must work to achieve a less strident tone, and increased cooperation with special interest groups.

Fertilizer Use

Continued from Page 5

urate, and 7 percent in solid urea. The industry of anhydrous ammonia rose 2 per cent relative to October 1985.

Exports of ammonium sulfate are up sharply in 1986, increasing more than 100 percent over the same period of 1985, TFI data. Exports of other nitrogen products declined. Imports of nitrogen solutions were up 5 percent and imports of solid urea increased more than 100 percent.

Disappearance of processed phosphates rose 3 percent in the monthly comparison but was unchanged in the year-to-date totals. Shipments of diammonium phosphate (DAP) and monoammonium phosphate (MAP) into domestic markets was stronger in October 1986 than in the previous year.

Phosphate production rose 8 percent in October 1986 compared with October 1985, but dropped 3 percent for the year-to-date. Production levels of DAP, MAP and phosphoric acid were higher in October.

The ending inventory of DAP rose 24 percent and MAP increased 4 percent, contributing to an overall increase of 13 percent. The phosphate rock inventory was 1 percent higher than in October 1985. Small imports of phosphate rock resumed in October, giving a total of 116,000 tons in the July-October 1986 period. Exports of DAP and MAP were down, totalling 333,000 tons for the month. Concentrated superphosphate export shipments showed improvement, increasing 16 percent over the 1985 year-to-date amount.

Disappearance of potash products dropped 34 percent in October relative to the previous year, and 14 percent in the year-to-date comparison. Standard muriate showed an increase in both comparisons, however.

Production increased in both comparison periods: 34 percent for the month and 19 percent for the year-to-date. Production of granular muriate recorded large increases in both periods.

ALIPHATIC ORGANICS

Chlorinated Solvents Hiked As Market Supply Tightens

The closure of E.I. du Pont de Nemours & Co.'s chlorinated solvents facility in Corpus Christi, Tex. last Summer has sharply tightened the global supply-demand balance for perchloroethylene and carbon tetrachloride. As a result, Dow Chemical posted a 2-cent-per-pound price increase on perchloroethylene, effective December 1.

Dow's increase, however, was not fully supported by the industry. Vulcan Materials recently posted a 1-cent-per-pound price increase for perchloroethylene and pushed the effective date back to January 1. Occidental Chemical, another perc producer, also posted a penny price increase, effective December 5 for spot business and January 5 for contract customers.

In the face of these developments, Dow, the largest chlorinated solvents producer in the world, amended its perchloroethylene increase by cutting the hike to 1 cent a pound and moving the effective date back to January 1. PPG, which does not release price announcements, also posted a 1 cent perc price increase, sources say.

In addition to hiking perc prices, Vulcan also posted 1-cent-per-pound price increases for methylene chloride and 1,1,1 trichloroethane. Oxy and Dow have also increased prices on these two chlorinated solvents, and LCP Chemicals & Plastics joined the methylene chloride initiative. The methylene chloride increase marks the second price hike on the product since October 1.

A Dow spokesman says Du Pont's Corpus Christi shutdown reduces world supply of perchloroethylene and carbon tetrachloride by 10 percent, and will drive world operating rates up to 90 percent of global capacity. It is this tightness that Dow cites in hiking perc prices.

RISING RAW MATERIAL

Another factor considered in rising perc prices, as well as methylene chloride and 1,1,1 trichloroethane, sources say, is rising raw material costs, particularly chlorine prices. Chlorine producers successfully boosted prices by $10 per ton in July, and are asking for another $10 on January 1.

Another major factor cited in the perc increase has been the solvent's decline in prices during 1986, brought on mainly by a flood of low-priced imports. Perchloroethylene selling prices have fallen from about 23 cents per pound in the first half of 1986 to a recent low of 17 cents, one source says.

In recent months, though, the flood of low-priced imports has slowed. The main source of low-cost imports has been Rumania, but sources say the weak US dollar has prompted a cutback of material shipped from there. Statistics show that total perc imports to the US this year have increased (160 million pounds annualized in 1986 compared to 140 million pounds last year) but most of the material shipped to the US is coming from Dow subsidiaries in Germany, Canada, and Brazil.

This year began as a difficult year for perchloroethylene-carbon tetrachloride producers. Imports had taken a significant portion of the US market and prices were tumbling. In addition, demand for perchloroethylene in its largest end-use, dry cleaning, is on the decline. New dry cleaning equipment has greatly improved perc recycling levels while reducing emissions, causing perhaps a 5 percent to 10 percent annual decline in perc sales volume to the business.

Thus, it was a major coup for producers when Du Pont, the largest user of chlorinated solvents, announced it was shutting its Corpus Christi solvents plant in July and purchasing its chlorinated solvents in the market.

According to sources, every US maker of perc stands to benefit from Du Pont's decision, although large sales volumes haven't been registered in the second half of the year, because Du Pont has built large stocks piles of chlorinated solvents and fluorocarbons. The real impact of Du Pont's move is expected to kick-in early next year.

Producers cited reduced imports in the methylene chloride prices for the second time in three months. Methylene chloride im-

PRICES TRENDLINES

WEEK ENDING DEC. 12, 1986

CHANGES/UP
None

CHANGES/DOWN
None

ALIPHATICS INDEX

The Aliphatic Organics index reflects the prices of 20 representative materials in this sector and the quantity of each produced in 1985.

Dec. 12, 1986	222.8
Dec. 5, 1986	222.8
Nov. 14, 1986	222.8
Dec. 13, 1985	222.8

Chemical Prices Start on Page 31

ports are entering the US at a 56-million-pound pace this year (30 million pounds for the through October), down from over 85 million pounds in 1985.

As a result, US production of methylene chloride is on the rise in 1986. Domestic output reached 407 million pounds through nine months this year, up from 383 million pounds during the first nine months of 1985.

Rising chlorine values were also cited in the methylene chloride price hike. One producer says a 2-cent-per-pound hike posted in October offsets the July chlorine price increases, while the January 1, methylene chloride hike will match chlorine price increases posted for the new year.

Like perchloroethylene, producers also say the two methylene chloride price hikes are intended to reverse a year-long slide in the solvent's price. Following what one producer called a fairly successful October price increase, methylene chloride selling prices are currently quoted at 22 cents per pound.

Methylene chloride has suffered in recent years from intense Federal study of the chemical as a suspected carcinogen. As a result, demand has been falling, particularly in the aerosol sector.

Occidental Chemical posts a representative price schedule for the three chlorinated solvents as follows: perc list prices remain at 23 cents per pound for distributor sales and 20 cents for consumers; methylene chloride prices are quoted at 26 cents per pound, less a discount of 8 percent and 1,1,1 trichloroethane prices are listed at 31½ cents, less an 8 percent discount.

ETHYLENE GLYCOL — Celanese Chemical Company has announced an increase in the selling price of ethylene glycol and diethylene glycol, effective January 1, 1987.

Selling prices for industrial and antifreeze grades of ethylene glycol are being increased by 1c. per pound, while diethylene glycol selling prices will be increased by 2c. per pound. All other terms and conditions of sale remain the same, and list prices are not changed, the company says.

Producers announced October 1 increases of 2c. per pound on both these products, although only the industrial grade increase is said to have held (CMR, 11/3/86, pg. 31).

METHYL ETHYL KETONE — Celanese Chemical Company has announced a 1c. per pound increase in the selling price of MEK, effective January 1, 1987. All other terms and conditions of sale remain unchanged, the

ALIPHATICS

list prices are not changed, the company says.

POLYOLS — Olin Corporation has announced that it will increase its off-list price for "Poly-G" flexible polyols by 5c. per pound on January 1, 1987, not to exceed the current list price.

The list price for Olin's flexible polyols remains at 70.5c. per pound in jumbo and car quantities. All other terms of sale, including payment, remain unchanged, the company says.

PROPYLENE GLYCOL — Dow Chemical USA has announced an increase in off-list prices for its family of propylene glycols, effective January 1, 1987.

The price increase will be 2c. per pound, and to exceed current list prices, for propylene glycol industrial, propylene glycol USP, dipropylene glycol, dipropylene glycol-LO, cement grinding aid, glycol P, "Sirlene" food additive and tripropylene glycol.

Dow's current industrial grade list prices are as follows: 40c. per pound at Freeport, Tex., and Plaquemine, La.; 41½c. per pound at Joliet, Ill.; and 42c. per pound at Lexington, N.C., Long Beach, Calif., Pittsburg, Calif., and Savannah, Ga.

Prices are f.o.b. shipping point. In addition, a temporary voluntary allowance of 2c. per pound is allowed for industrial and USP grade material shipped from Bayonne, N.J. The bulk to drum differential is 7.5c. per pound.

WHITE MINERAL OIL — The two major producers of white mineral oil and petrolatum announced price decreases on the two products earlier this month. Witco Corporation reportedly initiated the move, with Penreco following. New prices are effective December 1.

Prices on all grades of white mineral oil are decreasing by 20c. per gallon. For instance, 180-190 viscosity USP grade material is now $2.54 per gallon.

Petrolatum prices for both companies are dropping by 1c. per pound. For instance, USP lily white material in tanks is now priced at 29½c. per pound.

One producer notes that the decrease applies only to bulk and truckload shipments. In addition, he says that customers that were already paying off-list prices will drop to the new list price, not the full 20c. per gallon or 1c. per pound.

The price change was effected, says one, to reflect current market conditions. He feels that the new posted prices now reflect actual selling levels. Producers dropped prices earlier this year (CMR, 4/28/86, pg. 18) in response to declining oil prices.

One producer says that 1986 demand for mineral oil has been healthy. He cites grain de-dusting as a new and growing application for the product.

Beta Carotene

Continued from Page 4

dunaliella saline, grown in shallow tanks in the California desert, harvested daily and extracted with natural vegetable oil.

Experimental extractions began as early as 1982 and Microbio has been manufacturing "Provatene" since January 1985. At Kodak, optimism abounds. A spokesman says the company hopes to become a major factor adding, "this is a fairly new field and we are in it on the ground floor." The firm plans to offer beta-carotene suspensions of either 1.4 percent or 3.5 percent, in 180-kilo lots. The company hopes for large-volume contracts, mostly from packing companies where beta-carotene is used as a food additive.

No prices have been set, but they will be higher than those for the synthetic material. Although the new product will be more expensive, the Kodak's spokesman feels confident that there is a market for it. "It is our belief" he says, "that the natural product has more value." He admits, however, that there is no firm evidence as yet to support this claim.

Supply of natural beta-carotene has been dependent on the availability of raw materials. Problems of supply can be caused by seasonal changes, compounded by the fact that some of the materials are imported from remote areas of the world. Raw materials are mostly red palm oil and alfalfa.Occasionally, one source says, there is a good shipment of particularly carotene-rich carrot oil from Israel.

Extraction is a delicate process and it is difficult to get a stable product since beta-carotene is sensitive to heat and oxidation. Also, synthetic carotene producers claim, beta-carotene produced in this way contains a number of impurities, among them the alpha, gamma and delta isomers of carotene. However, customers in the health food market are said to prefer the isomer-containing product for its alleged curative properties.

PRICE A LIMITING FACTOR

One producer of natural beta-carotene with a yearly capacity of about 1,000 to 2,000 kilos feels pricing is a limiting factor. "We can't compete" he says. "Cost at the moment is four to five times the amount for the synthetic product." He adds, "We are only in the business as a convenience to our customers."

A spokesman for the largest producer of synthetic beta-carotene, Hoffmann-La Roche, expressed a "wait-and-see" attitude about the algae extraction plans. "The algae technology is still in the early stages" he says, expressing concern about the purity of the resulting product. He stresses his company's long-time experience with the synthetic production process and the superior purity of his product. "There is no difference between the natural and the synthetic product" he says.

At present, the base price for 30 percent suspension in vegetable oil is $40.75 per pound. There is general agreement in the synthetic industry that current prices do not reflect increases in production costs. Prices for beta-carotene have not been raised for several years.

For the immediate future, Roche expects growth development in the area of pharmacology. Research has been encouraging, says a spokesman, supporting the use of beta-carotene as a cancer preventative and as a substitute for vitamin A. In response to these developments Hoffmann-La Roche will launch a new tablet form early next year, tailored just for the pharmacological industry. And a number of manufacturers are supposed to have expressed interest.

Beta-carotene is currently used throughout the food industry as a food coloring agent, and generally the demand here is termed "stable."

There might even be some growth since, as a nature-identical color, it does not have to be listed as an artificial ingredient, a fact which makes it appealing to a growing market of consumers. "People are staying away from artificial products," says one source.

But there is general agreement in the industry that beta-carotene is about to "transcend" its function as a food coloring source as it enters more into the nutritional supplement arena. "Beta-carotene is increasingly looked at as an additive" says a BASF spokesman, the second major producer of synthetic beta-carotene. Although only about two years in the running, BASF is equally optimistic about their product. "For the future" he says, "we will see demand from many places."

PRICES TRENDLINES

WEEK ENDING DEC. 12, 1986

CHANGES/UP
None

CHANGES/DOWN
None

DRUGS INDEX

The Drugs & Fine Chemicals Index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1985.

Dec. 12, 1986	211.16
Dec. 5, 1986	211.16
Nov. 14, 1986	211.16
Dec. 13, 1985	211.16

Chemical Prices Start on Page 38

PSEUDOEPHEDRINE — Knoll Fine Chemicals will raise prices for pseudoephedrine hydrochloride, effective January 1. New prices will be as follows: 5[illegible] kilos, $59.50, up from $56.50; 1,000 kilos $61.00; 500 kilos, $62.,00; and 100 kilos $64.00. There will also be an increase for the sulfate ranging from $59.50 for 5,000 kilos to $68.00 for 50 kilos. The price change represents an increase of about 4 percent and the company blames the unfavorable exchange rate for the hike.

NIACINAMIDE — Following Lonza Inc.'s lead, Degussa will raise its prices for niacinamide feed grade, effective January 1 1987.

The new prices are as follows: 5,000 kilos and more $6.10 per kilo 1,000 kilos to 4,975 kilos $6.35; 250 to 975 kilos, $6.60; and less than 250 kilos $6.85.

Degussa adds that orders will be accepted from contract customers for quantities equaling not more than one-twelfth of purchases made from Degussa during the past 12 months. Orders must be placed prior to December 31, 1985 and for immediate delivery.

SODIUM ERYTHORBATE — As previously reported, Pfizer Inc. increased prices for sodium erythorbate to $2.75 per pound, up from $2.60 per pound.

This price increase represents the first in four years, and a spokesman for the company terms the increase modest. He referred to the sodium erythorbate market as a "slow growth market" with only small increases every year. He foresees no further increases in the near future and feels the market situation can bear the increase.

One industry source expects Pfizer's only competitor Fujisawa of Japan, represented in the US by PMP. Fermentation, to follow suit. PMP could not be reached for comment.

One supplier of the product describes the demand for sodium erythorbate as "good." He foresees no immediate shortages. "It's a closed market" he says, "and there are only two actors," referring to Pfizer and Fujisawa. "The increase will fly."

Used in the meat industry as an antioxidant, sodium erythorbate's growth potential is primarily linked to increases in the demand for meat. There is a small application

DRUGS & FINE CHEMS

for the product as an oxygen scavenger in the oil fields.

Furthermore, the recent ban on bisulfites for salad bars may create a new market. Although more expensive than bisulfite, sodium erythorbate in combination with citric acid, can be used for food preservation. Sodium erythorbate, a stereo isomer of vitamin C, represents a lower-cost alternative for vitamin C and can be used whenever vitamin labeling is not required.

WHEAT GERM OIL — Importers of wheat germ oil blame the exchange rate, especially the falling dollar against the German mark, as one puts it, for "a horrible year." "It made us non-competitive" says one source who imports 100 percent pure wheat germ oil from Germany. For the time being, he considers himself "out of the market," predicting no major changes for the coming year.

In contrast, a small domestic producer says: "Right now we are very busy; the market is pretty favorable for us." The company supplies the mink industry with wheat germ oil, where it is used as a source for vitamin E. Mink business is seasonal.

In addition, exports to Europe and the Orient benefit from the changes in the exchange rate. Overall, the source says, export prices fluctuate. "We will price our product for the going price that day," he adds.

Viobin, the nation's largest producer of wheat germ oil reports a "flat" market with prices stable at about $15 per gallon for cold pressed product, depending on quantity ordered. A spokesman predicts about a 5 to 10 percent growth for the coming year.

Toxic Dumps

Continued from Page 5

beauty aids that are manufactured abroad and imported by independent retailers rather than authorized US importers and distributors.

Known as parallel imports, these goods are generally banned under US trade laws.

However, under a 50-year Customs Service policy, such imports are allowed if the foreign and US trademarks are owned by the same company or by a parent and its subsidiary or if the US trademark owner has authorized placing the mark on the product.

In 1984, the rules were challenged by a coalition of companies in the fragrance and cosmetics industry, led by Charles of the Ritz.

Siding with the coalition, the appeals court ruled that the Customs Service rules violated the Tariff Act of 1930 and subsequent amendments, which gave an "absolute, unqualified property right upon American companies that own registered trademarks."

The Federal government appealed the ruling along with discount marketers, arguing that it would "result in a serious disruption of established business practices and settled commercial expectations."

Retailers are able to sell imports at discount prices by purchasing them overseas at the world price, while the US trademark owners pay higher prices demanded by the manufacturers.

Waste Generators

Continued from Page 5

...taking onto their remaining land disposal ...capacity in order to ensure that they can ...handle waste residuals from their own rapidly growing treatment business, he said.

According to Mr. Back, this expected capacity shortage is a by-product of the Hazardous and Solid Waste Amendments (HSWA) of 1984, which was enacted by Congress in 1984 in order to establish more stringent waste disposal requirements. The firms surveyed were asked to comment on their operations in 1985, their first full year under the new law.

The waste management industry's near-term capacity has been affected more by EPA's 'minimum technology requirements' than any other part of the amendments, said Mr. Back.

Most waste management firms, he explained, report that the requirements — which call for better design standards in landfills and surface impoundments — have made many hazardous waste generators decide to close their on-site waste lagoons or storage tanks rather than improve the design of these facilities. "The resulting demand for clean and tank closures and cleanups has increased business dramatically for many waste management firms, and has placed a strain on chemical treatment firms and incinerators that handle liquids and sludges," he said.

Increased cleanup business, plus the fact that more generators are using waste pretreatment techniques to reduce the volume of liquids in wastes sent to commercial waste management firms, has led to at least a 20 percent increase in the amount of solids and sludges brought in to the firms interviewed, said Mr. Back. "Commercial incineration firms are responding to this trend by changing their technology in order to handle more solid and sludge wastes," he said, adding that some incineration companies plan 200-400 percent increases in their solid and sludge waste handling capacity by 1990, barring any delays in the regulatory permitting process for new or expanded facilities.

BP Compounder

Continued from Page 4

...high voltage insulation compound production facilities. At the same time BP PPI ...manufactured polyolefin wire and cable jacketing. ...business of the Dow Chemical Company ...as well as Dow technology and patents, allowing BP PPI to offer additional performance jacketing compounds to the power cable and telecommunications markets. It also announced plans to increase its capacity for ...flexible thermoplastic elastomers for use in the automotive and speciality markets.

In 1985 BP Chemicals disposed of its U.K.-based PVC business, transferring one of its plants to ICI and closing the rest. At the same time BP acquired low-density polyethylene process and a plant from ICI. Since then, BP Chemicals has seen one of Europe's leading polyethylene suppliers.

The proposed transaction announced today reflects BP's overall strategy of moving out of the PVC business to the polyethylene business, where BP is one of the world's leading suppliers, particularly to the wire and cable industry.

BP Performance Polymers Inc. is a wholly owned subsidiary of BP North America Inc.

Chemical Recovery

Continued from Page 3

...survey found, to $17.3 billion. "There has been very little new plant construction for commodity chemicals and expansion of existing plants has provided new capacity where it has been needed," Mr. Foveaux observed.

He said the deemphasis on petrochemical production in favor of specialty products was evident, as spending for specialty products ...increased.

Research and development spending also rose during 1986 by 6 percent over 1985 to $11 billion. The industry expects an additional 8 percent increase during 1987.

For 1987, companies expect shipments to rise 6 percent — well above the increases of the past five years — pushing net income up 10 percent. Employment is forecast to remain the same.

Companies predict moderate increases in costs, with raw material prices advancing 1 percent while fuel and electric energy hold even. Construction costs, which increased 10-12 percent annually a few years ago, are expected to go up only 3 percent.

The industry believes further progress will be made in trade and predicts a 4 percent rise in exports. Commerce Department predicts a 2 percent increase in chemical imports, resulting in a 8 percent increase over the trade surplus of 1986.

Capital expenditures are predicted to rise 9 percent overall. An unusually high 16 percent will go to environmental controls, including air and water quality control and solid waste management. Only 24 percent will be put back into new capacity, a low proportion that reflects the lack of need for expansion of many products.

Manufacturers expect an 82.3 percent capacity utilization rate which would be to the highest in seven years. 82.9 percent in 1979.

Ampacet Europe

Continued from Page 9

market its product through its distributor network.

International marketing manager Daniel Gilray estimates the European market for Ampacet's range of products at 200,000 tons a year. The company, he says, should be able to take "11 percent going up to 16 percent" of that total.

The primary market for the company's additives is blown and cast polyethylene film, and is growing at 5 to 8 percent in Europe, according to Mr. Gilray.

The next largest is detergent and bleach product additives, which Mr. Gilray says, is growing at 3 to 5 percent.

Other major market areas are in extrusion castings said to be growing at 5 percent and polypropylene fibers and injection molding pipe.

As major competitors, Mr. Gilray cites Schulman, Ciba-Geigy, Cabot and Hoechst.

The company's line of products includes color concentrates, degradables, flame retardants, foaming agents, ultraviolet absorbers, antistatic agents, slip additives, antioxidants, antiblocking agents and multifuncitonal concentrates.

NIH Probing Argentine Test

National Institutes of Health has launched an inquiry to determine whether Federal guidelines were violated last Summer when a biomedical research laboratory field-tested a genetically altered rabies vaccine in Argentina.

NIH official Dr. Bernard Talbot says he wants to know whether the Wistar Institute of Philadelphia used Federal funds to conduct the tests in Argentina.

The use of such money would be a violation of the guidelines. However, Wistar officials say Federal grants were not used to fund the experiments and maintain the field tests were legal.

The tests, which involved the innoculation of 20 cows with the genetically engineered rabies vaccine, were conducted without the consent of either the Argentine or US governments.

After learning of the tests in September, the Argentine government criticized the exercise as "a violation of ethical principles."

In the US, Federal officials and some biotechnology company executives said the experiment raised questions about the adequacy of the Reagan Administration's program for regulating the biotechnology industry.

The Wistar officials say the tests, which were carried out in conjunction with the Pan American Health Organization, were legal because Argentina has no rules for field-testing genetically altered, living microbes, and the US regulations did not apply.

"We want to know how this field test was paid for," says Dr. Talbot. "If NIH gave Wistar a grant specifically for this field test and we did not know about it, then they are apparently in violation of the guidelines, "but if the money they received from us was used only to develop the vaccine, then they would not be in violation," he says.

Wistar, the nation's oldest biomedical research institution, has received about $1.4 million from NIH since 1984 to develop new rabies vaccines. The vaccine tested in Argentina was developed by adding a single gene from the rabies virus to the cowpox virus, which has been used for more than years as a smallpox vaccine.

Before releasing gene-altered vaccines the US, firms receiving Federal grants must first get approval from a panel of scientists Dr. Talbot says the rules also apply to experiments conducted in foreign countries if experiments are "supported" by agency funds.

Air Separation Unit Slated in California

UGI Corp., says that its AmeriGas subsidiary has awarded an $11 million contract to Ansutech Inc. for construction of a 35-ton-per-day air separation plant in northern California.

Ansutech will build the facility for AmeriGas Industrial Gases in the Laguna Station Park near Elk Grove in Sacramento County which is zoned for semiconductor industry development. The plant is scheduled to begin operation early in the second quarter of 1987.

The facility will produce liquid nitrogen, oxygen and argon which are used in petrochemical, steel, welding, medical and laboratory applications. In addition, it will produce ultra-high-purity nitrogen to serve the electronics industry in northern California and provide cylinder gases to AmeriGas for distribution through its chain of Welder's World retail stores in the state.

Under the contract, Valley Forge-based Ansutech is responsible for turnkey construction of the plant, including engineering, design, installation and start-up. Ansutech is a joint venture of AmeriGas and Nippon Sanso K.K., Japan's largest industrial gases firm.

Doctors See Drug Samples As Help in Lowering Costs

Pharmaceutical samples given to physicians by manufacturers play an important direct therapeutic role, according to a recent poll conducted for the Pharmaceutical Manufacturers Association.

The poll also showed that physicians' use of samples appear to be fairly restrained, and physicians would overwhelmingly reject an alternative system using coupons instead of samples.

"Physician Attitudes Toward Complimentary Drug Samples" reports data from a survey of 604 physicians on their use of complimentary drug samples provided by pharmaceutical companies. Developed and conducted by National Analysts, a division of Booz-Allen and Hamilton, Inc., the interviewing was based on a structured questionnaire. The study found that, on average, most doctors dispense only one prescription product sample at a time, and seven out of ten sampling occassions result in a prescription for the sampled product.

Physicians gave unaided responses to questions about why they use prescription samples; the most frequent responses were for medical concerns (81 percent) and concerns for patient costs (78 percent).

Medical concerns included the ability to test the efficacy and observe the possible side-effects of the drugs, and the need to start a treatment immediately. More than three-quarters of the doctors surveyed viewed samples as a way of helping to lower patient medical costs.

The poll found that samples are most often used as a "test" — assessing efficacy and side-effects when the drug is new to a patient — especially by internists. The data in the survey make it clear that physicians attach greater importance to assessing efficacy and side-effects when the drug is new to the patient, rather than new to the doctor.

Pediatricians responded that samples play an important therapeutic role, especially when pharmacies are closed or not easily accessible, and samples are the only resource at hand.

Physicians overwhelmingly rejected using a coupon system as an alternative to direct sampling. Many physicians stated that their objectives in providing samples would not have been met under such a procedure.

Requiring physicians to sign receipts for packages of medication samples generated the least opposition among possible modifications to the sampling system. Although more than a third of the physicians viewed it as inferior to the current system, three-quarters would have obtained the most recently sampled medication had such a requirement been in effect.

Biotech Team In DNA Advance

Scientists at Genetics Institute, Inc. have produced a human protein which may be used to treat cancer and infectious diseases.

The protein, called macrophage colony stimulating factor (M-CSF or CSF-1) was produced by recombinant DNA technology. It stimulates blood cells involved in the body's natural defenses. Drs. Gordon Wong and Steven Clark presented the results of their team's work on M-CSF last week at the 1986 annual meeting of the American Society of Hematology in San Francisco.

M-CSF promotes the production and stimulates the activity of blood cells called macrophages, which play an important role in the body's defense against disease. It is believed that augmenting macrophages with M-CSF will be useful in the treatment of certain infectious diseases, such as those affecting the lungs.

In addition, M-CSF therapy, either alone or in combination with antitumor monoclonal antibodies, may strengthen the body's ability to fight cancers.

Genetics Institute has commenced preclinical testing of M-CSF and plans to begin human clinical testing in 1987.

Previously, natural M-CSF had been isolated in small quantities from human urine. Through a collaboration with Japanese scientists at Morinaga Milk Industry Company Ltd., Jichi Medical School, and Tokyo University, Genetics Institute has shown that its genetically engineered M-CSF is structurally identical to the natural protein.

Scientists from other organizations have previously described the production of an M-CSF-related protein by recombinant DNA methods. However, this protein differs substantially in structure from the natural factor obtained from humans, while the Genetics Institute M-CSF is virtually identical to the natural molecule.

The biological significance of the M-CSF-related protein thus remains uncertain. Future investigation may establish that the single human M-CSF gene determines two related proteins with different functions.

Aspirin Role May Grow

Researchers say aspirin, used for decades to relieve headaches and cold symptoms, one day may be used to solve problems of pregnancy, constricted blood vessels and to help prevent various diseases.

At a symposium sponsored by George Washington University, the scientists said aspirin is emerging as a drug with many more uses than previously believed. Although it has been challenged as a pain killer in recent years by acetaminophen and other drugs that do not cause the stomach problems aspirin can, they said new markets may open.

Aspirin is increasingly being used in new clinical trials to see if it can help in treating diseases such as AIDS and cancer, as well as preventing some problems with pregnancy.

Dr. Allan L. Goldstein, chairman of biochemistry at the center and moderator of the program, said aspirin is emerging as a new "wonder drug" with many applications.

"Perhaps one of the most exciting new frontiers for clinical applications of aspirin is in the field of immunology," Dr. Goldstein told the session, which was supported by the Aspirin Foundation of America, an organization comprised of companies that make, process and promote aspirin products.

"These findings have wide-ranging implications for many immunological disorders and diseases in which immune response is a factor," including cancer, AIDS and perhaps the common cold, he said.

Dr. Judith Hsia, an associate of Sr. Goldstein, said both aspirin and a protein, thymosin, stimulate production of gamma interferon and interleukin-2 from white blood cells.

These cell products, known as immune modulators, boost the disease-fighting immune system and are being tested against diseases such as cancer and AIDS.

Preliminary human trials confirm test-tube results that the equivalent of one to two aspirin tablets daily can triple interferon production and double interleukin output, Dr. Hsia said.

Toxic Chemicals Focus of UN Rules

The United Nations Environment Programme has proposed rules for nations to follow in dealing with toxic chemical accidents. Speaking at a Cairo seminar on industrial hazardous waste, UNEP Chief Dr. Mostafa K. Tolba outlined plans for "a legal package that will vastly reduce the chances of another Bhopal or another Basel."

He proposed two new international conventions, one binding governments to notify each other when, where and how chemical emergencies resulting in transboundry pollution occur, and the other providing measures for prompt help among governments after an accident.

A third measure involves cooperation of governments, industry and community leaders to identify where acutely toxic chemicals exist, prepare measures to limit possible accidental releases and deal with accidents if they do occur.

Vitamins Linked To Lung Cancer

High doses of vitamins B-12 and folic acid may help prevent lung cancer in smokers by reversing harmful cell changes in lung tissue caused by tobacco fumes, a scientist said last week.

Tobacco smoke apparently causes a local vitamin deficiency when it hits lung tissue, creating cell damage believed to lead to cancer, said Dr. Charles Butterworth, chairman of the department of nutrition sciences at the University of Alabama.

A study conducted by university researchers showed daily doses of folic acid and vitamin B-12 reversed the cell changes, but Dr. Butterworth said the evidence did not mean smokers could continue their habits and stay healthy by taking vitamins.

"My own personal view would be to recommend that people stop smoking," he said at a nutrition seminar in Washington.

The cell abnormalities that lead to cervical cancer and that show up in a pap smear may be caused by the same sort of local vitamin deficiency, according to Dr. Butterworth.

The scientist is leading a five-year study that began in January and will enroll 750 women to determine if vitamin supplementation can help ward off cervical cancer.

Early results indicate women with cervical cancer have low folic acid intake but it is too soon to say any more, Dr. Butterworth said.

SmithKline Vaccine Approved in Belgium

SmithKline Beckman Corporation says its genetically-engineered hepatitis B vaccine has received marketing approval in Belgium. The vaccine has undergone clinical testing in a total of 15 countries abroad, but the company says it has made no decision about pursuing the US market.

SmithKline Beckman is not active in the US human vaccine market and Merck & Co. has already received regulatory approval in the US for its genetically-engineered hepatitis B vaccine. Merck plans to begin marketing the product here in January, and already sells the vaccine in Germany, Switzerland and Singapore.

Pharmaceutical Firms Invest In New Drugs for the Elderly

The pharmaceutical industry says it is responding to the demands of the "new demography" — that of an aging population and the need to improve quality of life — by investing heavily in research and development of drugs for the elderly.

A report by Pharmaceutical Manufacturers association examines the problems faced by America's fastest growing population segment and suggests steps the health community must take to deal with it.

By Social Security Administration estimates, there will be more than five million Americans over the age of 85 by the year 2050. Another study projects nearly nine million cases of Alzheimer's disease in persons over 65 by the year 2050.

As these demographics change and more is learned about the biology of aging, the research and development for new pharmaceuticals to treat these diseases will become more complicated and more expensive.

"Our changed population has produced a challenge for both the individual and for society," writes Dr. Leslie S. Libow, professor of geriatrics at the Mount Sinai School of Medicine.

'NEW DEMOGRAPHY'

"No society before us has ever faced this new demography. Indeed, our entire environment needs to be refocused with regard to our growing elderly population. It's a matter of adding life to years, not simply years to life."

In the report, Dr. Henry G. Grabowski, an economics professor at Duke University, addresses efforts in cost-containment proposals and regulatory measures.

"Suppose a drug or a medical device is truly enhancing? In other words, suppose it not only does not reduce costs but that it results in higher patient well-being...It is naive to think that our current prospective payment system will lead to the optimal social decision in every situation," Dr. Grabowski wrote.

He also points out that the burden on manufacturers to meet regulation requirements, increased paper-work, and cost-containment provisions will work to discourage medical innovation.

The report also focuses on the pharmaceutical industry's concern for the safety and efficacy of drugs for the elderly. Many companies now include older subjects in their clinical testing programs, especially for antihypertensive and other cardiovascular medicines.

The final section of the report studies adverse drug reactions in the elderly, ascribing many of these reactions to poor physician-patient communication and poor patient compliance.

Also considered are prescribing patterns for the elderly, including data showing that cardiovasculars, antibiotics, and analgesics are the most frequently prescribed medications for the older Medicaid population.

In addition to finding new treatments for the elderly, the section concludes that emphasis must be placed on prescribing existing pharmaceuticals in a safe and effective manner.

The authors of the papers throughout the report call on new educational and research measures to deal with medicine and the elderly, including establishing centers for geriatric pharmacology and pharmacy; providing medical school scholarships for encouraging the study of geriatrics; establishing centers for nursing home pharmacology and pharmacy; and continuing a committed research agenda by the pharmaceutical industry.

"The pharmaceutical industry is working hard to find treatments and cures for the diseases that affect the elderly," says PMA President Gerald Mossinghoff. "These diseases not only threaten life but also greatly reduce the quality of life for older Americans."

PMA board chairman William Miller adds, "...there is no better buy than good health. It is disease that is so expensive."

US Economy Seen Growing At Moderate Pace in 1987

The US economy should grow moderately in 1987 with somewhat higher inflation but stable interest rates, according to the latest survey of the nation's business economists.

Jerry L. Jordan, president of the National Association of Business Economists (NABE), last week released the results of the latest quarterly pool of the organization representing approximately 4,000 corporate, consulting, and government economists.

"The economists expect real GNP to rise by 2.5 percent in 1987 on a fourth quarter-to-fourth quarter basis," according to Mr. Jordan. "That compares with an increase of 2.5 percent estimated for 1986."

The economists look for little improvement in the unemployment rate, forecasting it to average just below 7 percent next year. However, they expect after-tax profits to advance by about 6.5 percent in 1987.

Commenting on the reasons for next year's growth, Mr. Jordan noted that the survey indicates a reduction in both housing starts and auto sales in 1987. "However, despite some negative influence capital spending, and they expect a turnaround in the foreign trade picture," he said.

The median forecast is a merchandise trade deficit of $132 billion in 1987, compared with a record estimated at $148 billion in 1986 (balance-of-payments basis).

Mr. Jordan, who is also Senior Vice President and Chief Economist of First Interstate Bancorp (Los Angeles), observed that conditions in the economists' own firms seem to support a view of growth in 1987. "More than one half of the respondents indicated rising demand in the past three months, up from only 39 percent reporting higher demand a year ago.

"The economists generally see 1986 as the low point for inflation, with consumer prices rising by less than 2 percent on a fourth quarter-to-fourth quarter basis. For 1987, their forecast is an inflation rate of 3.8 percent. They look for some further decline in the foreign exchange value of the dollar over the course of next year, but they anticipate little change in interest rates.

The median forecast indicates that the economists believe the bank prime rate might be slightly below the current level of 7.5 percent by the middle of next year and slightly above the present level by the end of 1987," according to Mr. Jordan.

"As the U.S. expansion begins its fifth year, economists continue to be concerned about a recession on the horizon. Although only about 30 percent believe we will be in recession by the end of 1987, about 60 percent expect a downturn by the end of 1988, and over 90 percent anticipate a decline before the close of 1989.

"Nevertheless, with respect to economic policy, 88 percent of the economists believe that monetary policy has been either too stimulative or 'about right,' with over 70 percent endorsing Federal Reserve policy as on track.

At the same time, the economists appear more pessimistic about the budget deficit.

HEAVY & AG CHEMICALS

Sodium Silicate

Continued from Page 7

pany's total sales. Terms of the transaction were not disclosed. As part of the sale, Power will offer employment to all 27 Du Pont employees who now operate the three sodium silicate plants involved in the sale.

Power will also offer employment to selected Du Pont technical and marketing employees.

"The business, while solid and healthy, no longer fits in the long-term portfolio of Du Pont's chemical businesses," said John C. Breckenridge, director of Du Pont's industrial chemicals division. "We are confident Power silicates will provide the necessary resources and commitment to this business and will continue to successfully serve the marketplace," he added.

Merchant sodium silicate producers like Du Pont concede that demand for the product has been relatively flat recently. Nevertheless, most are looking for the chemical to grow at close to 2 percent per year through the end of the decade, owing to general economic recovery and new or growing applications.

While more than 10 companies produce sodium silicates in the US, only three in addition to Du Pont — PQ Corporation, Occidental Chemical and Chemical Products Corporation — are generally considered merchant market producers. The others make silicates mainly as an intermediate to catalysts, zeolites and paint additives.

WASTE TREATMENT MARKET

A merchant area with promise is waste effluent treatment. Government pressure to clean up waste sites and to regulate waste emissions is increasing the cleanup and waste control effort.

Chemfix Technologies Inc., a New Orleans-based waste treatment company, owns the patent to a process by which it combines sodium silicate with a calcium-based setting agent, such as Portland cement, kiln dust or fly ash, to treat effluent waste.

According to a spokesman, the "Chemfix" process involves reaction of the calcium-silicate compound with the inorganic constituents in a waste stream. The resultant insoluble compound can then be extracted and disposed of in a sanitary landfill.

The spokesman says Chemfix is currently treating waste at Amoco Chemical Company's Wood River, Ill., facility as part of a project that should be completed about one year from now. The company is also involved with the South Essex Sewage district in Salem, Mass., in a project to clean up chromium contamination.

The spokesman notes that the "Chemfix" process was patented in 1973 but that industry interest wasn't particularly strong until Congress passed the RCRA ammendments in 1984.

Another potential growth market for sodium silicates is in the active fluid cracking catalyst (FCC) business, as the raw material for the production of zeolites, the FCC "active ingredient."

Growth will be somewhat limited for merchant silicate producers, because most FCC producers, such as Englehard Corporation, Ethyl Corporation, and W.R. Grace & Company, have captive silicates production.

However, in the second quarter of next year, the Ketjen Catalysts division of Akzo Chemie America plans to come on stream with a 50 percent expansion of its Bayport, Tex., catalyst production facility. The unit, which began production in late 1984, reportedly will have an overall FCC capacity of 44,000 tons per year when complete.

The plant is of interest to merchant sodium silicate producers because, at least up to this point in time, Akzo has had no capacity to produce silicates in the US. It does, however, make them in other parts of the world.

One silicates producer notes that the Akzo expansion will not affect the silicates business as much as the FCC business, since, to a extent, Akzo will only be taking market share from other FCC producers. Nevertheless, the merchant market should benefit, since most FCC producers have captive silicates production and any market share that Akzo picks up will create merchant silicates demand.

In addition to these changes in the FCC industry, FCC demand as a whole is said to be strong and is expected to be increasing next year. This is mainly due to the EPA mandated lead phasedown: as lead is eliminated from the gasoline pool, oil companies are looking for alternative sources of octane, and in many cases, increased catalytic cracking is called for.

On top of this, lower gasoline prices on the retail level, is spurring consumer demand for now relatively cheap high-octane gasolines. Observers say this phenomenon is exacerbating the octane scramble and consequently the increased interest in FCC's.

Another growth area for silicates, although small on a volume basis, is in the roofing materials business. One producer points out that more new and renovated homes are being roofed with synthetic roofing materials.

Overall growth is held back, however, by losses in such areas as detergents, which account for over one-quarter of silicates demand. Silicates tend to be used in conjunction with phosphates, and as detergent makers have reformulated away from phosphates for environmental reasons, silicates have suffered.

Liquid home laundry detergents are most popular in phosphate-ban areas where they work as well as, or better than, dry products, according to most accounts. Silicates producers note that soap makers are investigating the possibility of phosphate-containing liquids that would compete in the phosphate-allowed market.

Silicate producers don't seem to be betting too heavily on a breakthrough here, however. No consumer demand for a phosphate-based liquid seems to exist.

PRICES TRENDLINES

WEEK ENDING DEC. 12, 1986

CHANGES/UP
None

CHANGES/DOWN
None

HEAVY & AG INDEX

The Heavy & Ag Chemicals index reflects the prices of 18 representative materials in this sector and the quantity of each produced in 1985.

Dec. 12, 1986	113.69
Dec. 5, 1986	113.68
Nov. 14, 1986	113.69
Dec. 13, 1985	113.89

Chemical Prices Start on Page 36

CHLOR-CAUSTIC OUTPUT

OCTOBER: SHORT TONS/DAY

	OCT.	SEPT.	OCT. '85
CHLORINE			
Gas Produced*	26,262	26,125	27,186
Liquid produced	21,723	23,851	22,915
Liquid shipped	13,624	13,950	14,045
CAUSTIC SODA			
Liquid produced**	27,913	29,683	28,849
Solid produced	717	643	653
CAPACITY***	35,080	35,080	35,080
OPERATING RATE	86.1%	92.2%	79.6%

Source: Chlorine Institute.
*Includes amount liquefied.
**Includes amount later converted to dry caustic.
***Excludes 4570 tons/day currently mothballed.

BASES & SALTS

CHLORALKALI — Chemicals &

HEAVY CHEMICALS

Plastics Inc. joins major chloralkali producers (CMR, 12/8/86, pg. 29) in announcing off-list chlorine and caustic soda price increases.

LCP says that chlorine prices will increase by $10 per ton while caustic soda will increase by $15 per ton effective immediately for spot customers and according to terms for contract customers.

Also, the company says, effective January 1, 1987, the superfund tax on chlorine of $2.70 per ton and 28c. per ton on caustic soda will appear as a separate item on all invoices.

LCP's list prices remain as follows: $195 per ton for chlorine produced at Acme, N.C., and Brunswick, Ga., and $200 per ton at Calabula, Ohio, Moundsville, W. Va., Orrington, Me., and Syracuse, N.Y.; $220 per ton for regular grade caustic soda (50 percent basis) and $240 per ton for rayon grade caustic soda at all production locations.

Also last week, Pennwalt Corporation announced a $15 per ton increase in the price of all grades off caustic soda, not to exceed current list prices. Pennwalt is also adding the superfund tax to all invoices.

Pennwalt announced an increase on chlorine about one month ago (CMR, 11/10/86, pg. 30). Pennwalt produces in the Pacific Northwest, and at the time it was suggested that the early chlorine announcement was in response to especially tight supplies in that part of the country, due to a strong pulp and paper market.

Pfizer Inc. Obtains

Continued from Page 4

problems of octane requirement, emission control, fuel economy, engine efficiency and performance, and lubrication, PMC said.

Other products based on PMC's polarized hydrocarbon technology include pour-point depressants, oil additives and fuel stabilizers.

"Our relationship with Pfizer marks a major step in the emergence of Polar Molecular Corporation from its formative stages into the broad commercialization of its products," said Mark L. Nelson, president of PMC.

OSHA Determines the Risk Of Glycol Ethers to Workers

Occupational Safety & Health Administration says it has made a preliminary determination that occupational exposure to four glycol ethers poses a significant risk to workers which can be prevented or reduced through workplace regulation.

The agency is currently examining options for a proposed standard. OSHA's preliminary findings are said to affirm Environmental Protection Agency's assessment that occupational exposure to 2-methoxyethanol (2-ME), 2-ethoxyethanol (2-EE) and their acetates — commonly known as glycol ethers — may cause adverse reproductive, developmental, and hematologic effects. EPA estimated that between 200,000 and 350,000 workers are exposed to potentially unsafe levels of glycol ethers.

Last May, EPA formally referred these four glycol ethers to OSHA under the Toxic Substances Control Act after determining that exposures occur primarily in the workplace. Under TSCA, EPA may refer a substance to another federal agency if it finds that the substance poses an unreasonable health risk and the risk could be reduced by regulatory action by that agency.

OSHA analyzed EPA's evaluation of workplace risks and generally agreed with its findings. The agency made a preliminary determination that revised workplace standards for 2-ME, 2-EE, and their acetates appear economically and technologically feasible, that occupational exposure to these substances may represent a significant risk and that more stringent OSHA standards could reduce that risk.

Adverse health effects of these glycol ethers in several animal species include: testicular damage; reduced fertility; maternal toxicity; developmental abnormalities of the fetus; depression of the bone marrow and the immune system; and neurotoxicity. Epidemiologic studies and clinical reports have shown reductions in sperm count, gynecological disorders, hematologic effects, and neurotoxicity.

Current OSHA permissible exposure limits averaged over an eight-hour workday for these glycol ethers are: 2-methoxyethanol—25 parts 2-ME per million parts of air (ppm); 2-methoxyethanol acetate—25 ppm; 2-ethoxyethanol—200 ppm; and 2-ethoxyethanol acetate—100 ppm.

COATINGS & PLASTICS

Gum Rosin and Turpentine Hurt by Imports, Substitutes

Imports and a full-scale substitution of tall oil rosin and other cheaper materials have all but destroyed the US market for gum turpentine and rosin, producers say.

Last week, Union Camp Corporation announced that it will discontinue production of gum rosin and gum turpentine by the end of this month.

Although the company will continue to supply rosin customers with its "Unitol" tall oil rosin grades, and will still distribute WW grades of imported gum rosin, a spokesman for the company says it "no longer makes sense" for them to stay in the gum rosin business. The firm intends to convert gum rosin capacity at its Valdosta, Ga. plant to synthetic resin production.

This leaves two players in the domestic gum rosin/turpentine market: FRP Inc. of Hawkinsville, Ga., and Skelton Naval Stores, Inc. of Valdosta, Ga. FRP, previously a subsidiary of Monsanto Company's paper sizing business, was recently acquired by Akzo Chemie America.

Currently, FRP is said to control from 75 percent to 80 percent of the market for domestic material. This has enabled it to remain in a market which has moved almost entirely offshore.

HIGH-COST PRODUCTION

Production of crude gum rosin and gum turpentine is said to be highly labor intensive, reflected in significantly higher costs than those for materials with similar properties, such as tall oil rosin, and wood and sulfate turpentine. Lower labor costs have enabled producers abroad to offer large quantities of material at significantly lower price than domestic material.

Gum turpentine is said to be selling between $2.50 and $2.65 per pound, as compared with $2.00 per barrel for steam distilled wood turpentine and 90 cents per barrel to $1.00 per barrel for crude sulfate turpentine.

Similarly, where gum rosin currently sells for 45 cents per pound to 56 cents per pound, wood rosin is priced between 32 cents per pound and 37 cents per pound, and tall oil rosin, between 25 cents per pound and 30 cents per pound.

Most of the gum material available on the market today is imported from China, Portugal and Brazil, producers say. Although domestic suppliers say it is generally of inferior quality, Chinese material is much cheaper than US material, and is said to dominate the export market in the US.

Wherever possible, users of gum products are turning to lower priced tall oil rosin, and wood and crude sulfate turpentine.

A spokesman for FRP Inc. estimates that the current market for gum rosin totals between 9.6 and 10 million pounds per year. The market for wood turpentine and rosin, he estimates, is between 2 and 3 times the size of that for gum.

Both markets, however, are dwarfed by the markets for tall oil rosin and crude sulfate turpentine.

Demand for tall oil rosins has been good this year, a spokesman for Union Camp, a major producer, asserts. Inventories are down significantly from last year, at 50 million pounds compared with 75 million pounds in 1985.

Statistics released by the Pulp Chemicals Association show the domestic market for tall oil rosin up almost 7 percent through September of this year, at about 350 million pounds.

Pulp Chemicals Association statistics show domestic demand for crude sulfate turpentine at 22,550,000 gallons, with inventories totalling 7 percent of the total market.

Prices have been holding steady at an average of 95 cents per gallon, but one producer, noting relatively high inventories, feels crude sulfate turpentine may fall in the months to come. This is not demand related, as the market for sulfate turpentine has been strong this year, he says.

Tall oil rosin demand is expected to grow over the next five years, as the material assumes shares of the adhesives, inks and sizing markets now dominated by petroleum (C_5 and C_9-based) resins. The rosins predominate in some markets shared with polyterpene resins, particularly hot-melt adhesives.

Although lower-cost hydrocarbon resins have dominated the adhesives and ink markets for the past few years, with 65 percent of

Continued on Page 53

PRICES TRENDLINES

WEEK ENDING DEC. 12, 1986

CHANGES/UP
None

CHANGES/DOWN
None

COATINGS INDEX

The Coatings & Plastics index reflects the prices of 13 representative materials in this sector and the quantity of each produced in 1985.

Dec. 12, 1986	306.4
Dec. 4, 1986	306.4
Dec. 15, 1986	306.4
Dec. 13, 1985	306.4

Chemical Prices Start on Page 40

COATING & PIGMENT IMPORTS: OCTOBER

CENSUS BUREAU REPORTS ON THE TOP PAINT MATERIALS.

		OCTOBER 1986		SEPTEMBER 1986	
		QUANTITY	$ VALUE	QUANTITY	$ VALUE
Antimony oxide	lbs.	1,834,734	1,491,459	2,178,955	1,939,990
Carbon black	lbs.	13,259,276	3,576,047	10,459,015	2,936,956
Chrome colors:					
Chrome oxide green	lbs.	1,11,412	1,081,415	160,101	169,034
Molybdate orange	lbs.	110,546	111,405	149,050	142,051
Yellow	lbs.	266,042	193,268	354,958	282,593
Zinc Yellow	lbs.	256,572	148,490	145,324	162,651
Cobalt Oxide	lbs.	33,089	142,575	20,942	131,375
Copper Oxide	lbs.	44,092	25,991	N/A	N/A
Iron blues	lbs.	561,059	638,784	777,692	929,570
Iron oxides, hydroxides, nat'l	lbs	211,442	59,426	64,032	9,084
Synthetic:					
Black					
Red	lbs.	N/A	N/A	94,574	23,937
Yellow	lbs.	1,115,005	153,120	1,205,867	227,074
NSPF	lbs.	2,361,387	520,304	1,743,746	361,419
Lithopone	lbs.	708,782	423,755	940,482	427,068
Red Lead	lbs.	2,644,333	554,904	2,711,022	526,637
Sheblack, bleached	lbs.	70,000	16,450	90,000	19,822
Slick buttonites, other inco	lbs.	110,136	285,213	82,650	175,431
Steel leo	lbs.	82,085	125,391	133,473	190,117
Titanium dioxide	lbs.	440,007	376,338	617,991	520,361
Ultramarine blues	lbs.	24,450,814	15,534,017	26,540,012	16,365,535
White lead, basic carbonate	lbs.	567,381	617,450	387,725	413,305
Zinc Oxide (lead free)	lbs.	40,036	14,370	40,000	21,929
	lbs.	9,837,916	3,468,043	6,548,410	2,385,175

PERFUMES & FLAVORINGS

Heliotropine Pricing Climbs; Further Gains Expected Soon

Heliotropine prices have been firming in the past two weeks as producers weather the effects of increasing ocotea cymbarum oil prices and reports that availability of ocotea will be reduced in 1987. Demand, meanwhile, continues healthy with buyers trying to beat the expected institution of even higher prices.

Heliotropine is currently sold for \$9 to \$9.50 per pound on the US spot market, up from \$8 per pound a month ago. One buyer says \$9 per pound is the low end, even though small amounts are offered at that level. "Sales of larger quantities will probably not be discounted because producers are offering it at the lowest possible price."

Though major domestic and foreign producers cite the ocotea cymbarum pricing as the reason for the heliotropine firming, the degree of increase in heliotropine does not reflect the full impact of the ocotea. "The price advances in heliotropine are not in direct proportion to those in ocotea," says an essential oils importer. "Both domestic and foreign producers are not as of yet passing the increases on."

An aroma chemicals broker concurs that prices are being held down and suggests that domestic suppliers would have it otherwise: "They have come down to the \$9 range to keep competitive, even though they pushed for the \$10 to \$11 per pound range."

A representative of the major domestic producer of heliotropine does foresee the price firming toward \$11 per pound. He says that production levels will not be affected by the ocotea situation and that no new sources of demand exist: "We do not see a surge in new business."

JAPAN PRIMARY SOURCE

The primary foreign sources of heliotropine competition are Japan with over 70 percent of imports, Brazil with about 17 percent and China at about 10 percent. Figures are based on total imports from January through October, 1986, a cumulative of 251,533 pounds.

Japanese producers are confronted by the strengthened yen which, while not affecting raw material prices, works against them in terms of labor and fixed costs. "We have been compelled to raise prices," says a spokesman for the major Japanese heliotropine exporter, "because of the yen and the advancing costs of ocotea cymbarum oil."

He adds that \$9 per pound is currently a higher end quote and that they will try to move prices up in the near future. "The competition from Brazil has been making it difficult for us to raise prices."

The other major heliotropine exporter to the US, China, has been characterized as temporarily out of the picture by industry sources. The most common reason cited for their decreasing exports is domestic consumption. "The Chinese are not offering any heliotropine," says an aroma chemicals broker, "though they're reportedly still buying the ocotea."

Ocotea cymbarum oil prices have increased steadily in the past month for several reasons (CMR 11/3/86 p. 47). But aside from the emergence of China as a buyer, sources point to the rising popularity of its derivatives (piperonyl aldehyde and piperonyl butoxide) as synergists in producing insecticides for the stimulation of ocotea sales. "If there's pressure on ocotea," says an aroma chemicals dealer, "it isn't because of heliotropine demand but rather the piperonal derivatives used in insecticides."

Outlooks for heliotropine pricing settle on gradual increases. In light of the current climate where people are selling "with little or no profit so they at least show no decline in sales," a market analyst says the situation will give way to the \$11 range.

However, one industry observer notes that "the major trend will be to a weaker yen and a stronger dollar," suggesting that if the Japanese can hold their pricing levels down long enough, they may be able to keep them there.

AROMA CHEMICALS

BENZYL ACETATE — Chinese benzyl acetate prices dropped last week in an attempt to remain competitive with European and Mexican producers (CMR 11/24/86 p. 26). Sources report a decline of 25c. to 40c. on shipping prices from mainland China to around \$1.75 per kilo cost and freight insured. Supplies are considered easy with inventories well stocked from large quantity sales earlier this year.

PRICES TRENDLINES
WEEK ENDING DEC. 12, 1986

CHANGES/UP
Allspice, Central American, 2c. per lb.
Annatto seed, Dominican, 23c. per lb.
Cinnamon, H-2, 5-10c. per lb.
Cinnamonleaf oil, 5c. per kilo
Citronella oil, 25-50c. per kilo
Eucalyptus oil, Australian 70%, 20c. per kilo
Eucalyptus Citriodora, Chinese, 20-60c. per kilo
Litsea Cubeba oil, 35c. per lb.
Nutmegs, East Indian delivered, 3c. per lb.
Ocotea, Chinese, 10c. per kilo
Pepper, black, 7-8c. per lb.
Peppermint oil, 40c. per kilo

CHANGES/DOWN
Anise seed, Spanish/Turkish, 3-7c. per lb.
Benzyl acetate, Chinese, 25-40c. per lb.
Camphor oil, 1.070, 40c. per kilo
Chillies, Chinese Zheijang, 3c. per lb.
Cloves, Madagascan/Brazilian, 5c. per lb.
Juniperberry oil, rectified, \$5 per kilo
Turmeric, Alleppy 3-6%, 1c. per lb.

PERFUMES INDEX
The Perfumes & Flavorings index reflects the prices of 11 representative materials in this sector and the quantity of each supplied in 1985.

Dec. 12, 1986	71.00
Dec. 5, 1986	71.00
Nov. 14, 1986	71.00
Dec. 13, 1985	71.00

Chemical Prices Start on Page 36

ESSENTIAL OILS

PEPPERMINT OIL — Yakima native peppermint oil shipping prices increased 40c. per pound last week to \$8.75 to \$9 per pound. The firming, according to an essential oils broker, was in response to a "flurry of business; major sales were made." As a consequence, the amount of peppermint oil available for marketing is a matter of concern for buyers.

According to a peppermint oil grower, however, supplies of peppermint oil are adequate and will remain so through the 1987 harvest. "We've had two very good growing years. Of the 750,000 pounds available for sale two years ago, about 250,000 pounds remain. He adds that because too few growers are taking peppermint acreage out of production, the price ceiling from field will be ... per pound.

Another grower agrees, saying that the ... level could be breached only by a wide concerted effort. The problem, he stresses, is that "there is really no alternative crop for the farmers to turn to. They're leaving the old stands in because they want the yield." An "old stand" is a plant in its third or fourth year of production.

SPEARMINT OIL — Far West spearmint oil is not suffering from as aggravated an oversupply situation as earlier reported in this column (CMR 11/10/86 p. 27). An administrator of the Federal Marketing ... notes that major spearmint oil producers ...

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Consumers Get Top Packages, Says Food Processors Group

Quality assurance programs by food manufacturers, together with government monitoring efforts, assure consumers that domestic packaged foods are free of illegal pesticide residues, says the National Food Processors Association.

The association responded to reports issued by the General Accounting Office, which alleged that the Food & Drug Administration does not provide adequate surveillance of pesticide residues in imported and domestic foods.

NFPA said domestic food manufacturers carefully police incoming stocks of raw products to assure that they do not contain illegal pesticide residues. A part of the monitoring effort by industry is NFPA's "protective screen program," which the trade group said assures that growers comply with restrictions on pesticide use.

Processors test for pesticide residues in their own laboratories and use such scientific facilities as the NFPA's research laboratories.

The trade group said in addition to monitoring incoming raw commodities, processors wash, peel, blanch and process the raw product in ways that assure that residues within allowable tolerance levels are further reduced or eliminated.

The industry programs, in place for several years, are supplemented by the monitoring programs of state agencies and of both Food and Drug Administration and the Agriculture Department.

"Our industry has supported full funding of the budget requested by FDA so that the agency can adequately carry out critical food safety work in such areas as improving microbiological surveillance, new product approvals and screening, and stepping up surveillance of imports to assure that they meet the same standards of safety and wholesomeness as domestically produced products," says Charles J. Carey, president of NFPA.

"We believe that FDA's current surveillance programs for pesticide residues, coupled with the self-policing programs that US industry has long undertaken, are doing a good job with respect to domestic foods," says Mr. Carey.

CHEMICAL PRICES

WEEK ENDING DECEMBER 12, 1986

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

An index of weekly chemical market reports is on the back cover.

A

Abies alba, dms. ... kilo	24.00	27.00
Acetaldehyde, 99%, tanks, frt. alld. lb.	.37	-
Prices 1c. higher in West.		
Acetaminophen (see N-Acetyl-p-aminophenol)		
Acetanilide, tech, flaked, bgs, t.l., f.o.b. works ... lb.	1.29	-
Acetic acid, tech., tanks, divd. E ... lb.	.25	-
Acetic anhydride, tanks, divd. E ... lb.	.43½	-
Acetic anhydride prices 1c. higher in West.		
Acetoacetanilide, dms., t.l., divd. ... lb.	1.29	-
Acetoacet-o-anisidide, dms., t.l., divd ... lb.	2.70	-
Acetoacet-o-chloroanilide, dms., t.l., divd ... lb.	2.85	-
Acetoacet-o-toluidide, dms., t.l., divd ... lb.	1.58	-
Acetoacet-m-xylidide, dms., t.l., divd ... lb.	3.33	-
Acetone, tanks, divd. E. ... lb.	.25	-
divd. Zone 2 (Calif.) ... lb.	.27	-
divd. Zone 3 (W. of Rockies excluding Calif.) ... lb.	.27	-
Acetonitrile, tanks, frt. alld. ... lb.	.53	.54½
Acetophenetidin (see Phenacetin).		
Acetophenone, tech., tanks, f.o.b. works ... lb.	.76	.85
perfume grade, extra, cns ... lb.	2.15	-
N-Acetyl-p-aminophenol, c.l., t.l. works ... kilo	5.95	6.64
Acetylene black, imp., 50% compressed, 12½-lb. bgs. c.l., t.l. frt. extra ... lb.	.96	-
100%, 25-lb. bgs., same basis ... lb.	.95½	-
Acetylene tetrabromide, tanks, f.o.b. works ... lb.	.97	-
Acetylsalicylic acid, USP (see Aspirin).		
Acetyltributyl citrate, bulk, f.o.b. works ... lb.	1.28	-
Acetyltriethyl citrate, bulk, f.o.b. works ... lb.	2.06	-
Acrolein, tech., tanks, works ... lb.	.62	-
Acrylamide, solid, t.l. works ... lb.	1.00	-
soln., 100% basis tanks, works ... lb.	.74	.77
Acrylic acid, glacial, reg., tanks, divd ... lb.	.67	-
tech., tanks, frt. alld ... lb.	.60	-
Acrylonitrile, tanks, works ... lb.	.39½	.45½
Acrylonitrile-butadiene-styrene resin, high-impact, nat., t.l., dms., divd. ... lb.	1.09	1.12
medium-impact, nat., same basis lb.	1.05	1.08
low-impact, nat., same basis ... lb.	.98	1.01
Adipic acid, resin grade, bulk, hopper cars, frt. equald. ... lb.	.57	-
bgs., t.l., c.l. frt. equald. ... lb.	.59	-
Agar USP, powd., 60 to 100 mesh., dms. ... lb.	9.50	9.85
Alcohol, syn. C-8 to C-10, tanks, f.o.b. works ... lb.	.38	-
C-12 to C-13, tanks, divd. ... lb.	.57	.59
C-14 to C-15, tanks, divd. ... lb.	.57	-
C-16 to C-18, tanks, divd. ... lb.	.60	-
Aldehyde, C-6, dms. ... lb.	4.10	5.70
C-7, dms. ... lb.	1.95	-
C-8, dms. ... lb.	4.30	6.30
C-10 dms. ... lb.	4.30	5.35
Algin (see Sodium alginate.)		
Alkali blue, dry, flushed, 110-lb. dms, divd. ... lb.	3.72	3.83
Alkali blue prices 1c. higher W. of Rockies.		
Allspice Guatemalan / Honduran, bgs. ... lb.	.97	-
Jamaican, bgs. ... lb.	1.05	-
Allyl alcohol, tanks, f.o.b., Bayport, Tex. ... lb.	.90	-
Allyl bromide, 500-kilo dms. 2,000 lbs. or more, works ... lb.	5.50	-
Allyl caproate, 25-lb. cns. ... lb.	3.90	4.50
Allyl chloride, tanks, f.o.b. works ... lb.	.65	-
Allyl isothiocyanate, bots. ... lb.	5.40	6.90
Almond oil, artif., bitter (see Benzaldehyde.)		
Almond oil, nat. bitter, NF f.f.p.a. bots. ... lb.	3.50	3.60
sweet ... lb.	1.24	1.50
Aloe, Cape, cs. ... lb.	2.00	-
powd., cs ... lb.	2.25	2.75
Curacao, kgs. ... lb.	2.60	-
powd., kgs. ... lb.	3.00	-
Aloin, NF, dms. ... lb.	6.00	6.70
Alum, ammonium, tech. gran., bgs., c.l., t.l., works ... 100 lb.	35.00	-
FCC powd., floor dms., works 100 lbs.	55.00	-
Alum, potassium, tech. gran. bgs., c.l., t.l., works ... 100 lbs.	35.00	-
FCC powd. fiber dms., works . 100 lbs.	55.00	-
Alumina, activated, gran., 100-lb. bgs., 40,000-lb. min. c.l., works ton	821.00	-
calcined, bulk, same basis ... ton	354.00	-
100-lb. bgs., same basis ... ton	380.00	-
hydrated, white, bulk, same basis ... ton	190.00	-
100-lb. bgs., same basis ... ton	224.00	-
Aluminum acetate, basic, dms., l.c.l., works ... lb.	3.25	-
Aluminum chloride, anhyd., soln., 500-600 lb. dms., c.l., t.l., works, frt. equald. ... lb.	.53	-
bulk, same basis ... lb.	.48	-
semi-bulk bins, same basis ... lb.	.52	-
Aluminum chloride, coml., soln., 32° tanks, works ... 100 lbs.	15.00	-
ret. dms., c.l., works ... 100 lbs.	12.00	-
non-ret. dms., same basis . 100 lbs.	20.00	-
Aluminum formate, dibasic, liq. 8% Al_2O_3 t.l., works ... lb.	.55	-
Aluminum hydrate (see Alumina, hydrated)		
Aluminum hydroxide, dried, gel, NF, 75-lb. dms., c.l., t.l., works. lb.	2.75	3.50
Aluminum metal, 99½% or more, 50-lb. pigs., 30,000-lb. lots, frt. alld. ... lb.	.76	-
Aluminum oxide amorphous (see Alumina, calcined).		
Aluminum paste, leafing grade, std., lining, 2,400 lb. lots, divd. ... lb.	1.40	-
lining, extra-fine, same basis ... lb.	1.99	2.14
Aluminum phenolsulfonate, purif., 100-kilo dms., t.l. ... kilo	6.46	-
Aluminum powder, leafing grade, std. lining, 2,400 lb. lots, divd. . lb.	3.17	-
extra fine, lining, same basis ... lb.	4.04	-
Aluminum stearate, bgs., c.l. ... lb.	1.25	1.36
Aluminum sulfate, coml., grd., 100 lb. bgs., c.l., works, frt. equald., basis 17% Al_2O_3 East and Gulf Coasts ... ton	205.00	-
West Coast ... ton	220.80	-
liq., tanks, N.E. same basis ... ton	145.00	-
iron-free, dry, bgs., c.l. same basis ... ton	300.00	-
liq., tanks, same basis ... ton	225.00	265.00
Aluminum sulfate, USP, gran., dms. lb.	-	.337
Aminoacetic acid, USP, dms., 20,000 lbs., f.o.b. works ... lb.	2.12	-
tech., t.l., same basis ... lb.	1.88	-
p-Aminobenzoic acid, 1,000 kilos or more, dms., f.o.b. works . kilo	9.60	10.10
2-Amino-4-chlorophenol dry and grd., 14,000 lbs. or more, frt. alld. lb.	5.79	-
Aminoethyl ethanolamine, tanks, frt. collect ... lb.	1.33½	-
N-Aminoethyl piperazine, tanks, f.o.b., frt. collect ... lb.	1.05	-
2-Amino-2-ethyl-1,3-propanediol dms., t.l. f.o.b. works ... lb.	1.82	-
2-Amino-2-methyl-1-propanol, 95%, dms., c.l., t.l., f.o.b. works . lb.	.95	-
tanks, f.o.b. works ... lb.	.89	-
o-Aminophenol, dms., f.o.b. Charlotte, N.C. ... lb.	3.95	-
p-Aminophenol, t.l. dms., f.o.b. Raleigh, N.C. ... kilo	7.15	-
p-Aminosalicylic acid, USP, 50-kilo dms., t.l. ... kilo	18.50	-
Ammonia, anhyd., fertilizer, wholesale, tanks, divd. Midwest terminals ... ton	165.00	170.00
tankcars, f.o.b. Gulf Coast ... ton	80.00	85.00
aqueous, 29.4% NH_3, anhyd. basis, tanks, frt. equald. E. of Rockies ... ton	260.00	315.00
Ammoniacal liquor (see Ammonia, aqueous).		
Ammoniac sal, galvanizing grade, bgs., c.l., f.o.b. works ... 100lbs	28.60	-
Ammoniac sal. white (see Ammonium chloride coml.).		
Ammonium biborate, gran., dms., c.l. works ... lb.	.90	-
Ammonium biborate powder 15c. per lb. higher.		
Ammonium bicarbonate, 300-lb. fib. dms., c.l., works ... 100 lbs.	26.00	-
bgs., c.l. ... 100 lbs.	25.00	-
Ammonium bichromate, photo-litho grade, gran. 100-lb. dms., l.t.l. works ... lb.	2.00	-
Ammonium bifluoride, bgs., t.l., works ... lb.	.70	-
Ammonium bromide, dom. NF, gran., dms., c.l., t.l., f.o.b. works . lb.	1.31	-
Ammonium chloride, white, tech., fine gran., bgs., c.l., works ... 100lbs.	18.00	-
USP, gran., dms. ... lb.	.40	.53
Ammonium citrate, dibasic, 250-lb. dms. f.o.b. works ... lb.	2.79	-
Ammonium dimolybdate, approx. 85%, 24,000 lbs. or more . lb.	5.48	-
Ammonium fluoborate, tech., dms., c.l., t.l., works, frt. equald. . lb.	1.79	-
Ammonium heptamolybdate, cryst., dms., 24,000 lbs. f.o.b. works ... lb.	5.57	-
Ammonium lauryl sulfate, tanks, f.o.b. works ... lb.	.29	.32
Ammonium lignin, sulfonate, bulk, f.o.b. Hoquiam, Ore. ... ton	72.00	-
Ammonium nitrate, dom., fertilizer grade, 33.5% N, bulk, S.E. divd. ... ton	130.00	135.00
Ammonium oxalate, tech., fine. gran. 300-lb. dms., t.l., f.o.b. works ... lb.	1.42	1.68
Ammonium pentaborate gran. bgs., c.l., works ... lb.	.75	-
Ammonium pentaborate powder 20c. per lb. higher.		
Ammonium persulfate, 225-lb. dms, 24,000 lbs. or more, f.o.b. works ... lb.	.58	-
55-lb. bgs., same basis ... lb.	.56½	-
Ammonium phosphate (see Di- and monoammonium phosphates).		
Ammonium silicofluoride, dms. c.l., t.l., works ... lb.	.30¾	-
Ammonium sulfate, lg. gran., bulk, c.l., works ... ton	80.00	90.00
std., coml., bulk, f.o.b. works .. ton	60.00	70.00
tech., bgs., c.l., t.l., works ... ton	108.00	120.00
Ammonium sulfide, liq., 40-44% tanks, 100% basis, frt. equald. .ton.	460.00	-
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate).		
Ammonium thiocyanate, tech., cryst., bgs., c.l., works ... lb.	1.02	-
tech soln., 50%, tanks, frt. equald. ... lb.	.93	-
Ammonium thiosulfate, photographic, 60%, tanks, f.o.b. works . lb.	.13	-
Ammonium zirconyl carbonate, soln., bulk ... lb.	.72	-
Amyl acetate, primary mixed isomers, tanks, divd. ... lb.	.57	-
Amyl alcohol, primary mixed isomers, tanks, frt. alld. ... lb.	.46½	-
Amyl cinnamic aldehyde, dms. ... lb.	2.35	2.50
p-tert-Amylphenol, bulk, works ... lb.	.91	1.03
Amyris oil, dms. ... lb.	11.00	-
Anethole, tech., dms. ... kilo	10.20	-
USP, dms. ... lb.	3.65	4.60
Angelica root oil, bots. ... kilo	700.00	-
Aniline, tanks, f.o.b. ... lb.	.33	.35½
Anise oil, dms. ... kilo	8.90	-
Anise seed, Chinese, bgs. ... lb.	1.40	-
Spanish, bgs ... lb.	1.10	-
Turkish, bgs. ... lb.	1.05	-
Anisic aldehyde, cns., dms. ... lb.	4.80	5.40
o-Anisidine, imp., dms., divd. ... lb.	2.27	-
p-Anisidine, imp., cast solid, dms., works ... lb.	1.90	-
flakes, same basis ... lb.	2.26	-
Anthranilic acid, purif., 99% min., dms., t.l., frt. alld. ... lb.	1.70	-
Antimony fluoborate, liq. conc., 175-lb. dms., t.l., works ... lb.	3.02	-
Antimony metal, bulk, c.l., mines ... lb.	1.35	1.39
Antimony oxide, high-tint, bgs., c.l., frt. alld. E. of Rockies ... lb.	1.26	1.50
Antimony trichloride, anhyd., solid, dms., t.l. works ... lb.	3.60	-
Apomorphine hydrochloride, NF, bots., ... gm.	15.00	-
Apricot kernel oil, dms. ... lb.	2.05	-
Arabic gum, powd., bbls. ... lb.	1.85	2.15
spray dried ... lb.	2.00	2.60
USP grade ... lb.	6.75	9.25
Aromatic petroleum solvents (see Solvent, naphtha, petroleum, aromatic).		
Arsenic, crude (see Arsenious trioxide).		
Arylid, red (see Napthol, arylid red).		
Arsenious trioxide, 99%, bulk, c.l., f.o.b. warehouse ... lb.	.42	.45
Asbestine (see Talc, fibrous).		
Ascorbic acid, USP, 100 kilos, divd. ... kilo.	11.00	-
Ash, black (see Barium sulfide).		
Asphalt gilsonite, (see Gilsonite).		
Asphalt petroleum cutback, tanks, E. Coast ... gal.	.86	-
emulsion, tanks, tankwagons, E. Coast ... gal.	.68	-
steam-refined, 40-300 penetration, tanks, tankwagon ... ton	170.00	-
steep roofing grade, bulk tankwagon ... ton	175.00	-
Aspirin, USP, cryst., powd., 250-lb. dms., c.l., f.o.b. ... lb.	1.95	-
10% starch granulation, white, 250-lb. dm, c.l., f.o.b. ... lb.	1.97	-
16% starch granulation, white, same basis ... lb.	2.80	-
Freight equald. shipt. identical quantity over standard routes from N.Y., Phila., Midland, Mich., Chicago and St. Louis.		
Atropine sulfate, USP, bots ... oz.	10.00	11.00
Avocado oil, dms. ... lb.	4.00	4.50
Azelaic acid, tech., 50-lb. bgs., t.l., c.l., divd. ... lb.	1.23	-
Azo orange, bbls., divd. ... lb.	7.00	9.50
Azo yellow, 10 G, bgs., divd. E. of Rockies ... lb.	8.95	-
Azo G yellow pigment, bgs., same basis ... lb.	8.65	-

B

Bacitracin, USP, non-sterile, one billion units or more ... million units	6.30	6.80
Barbital, NF, 50-kilo dms., divd. .. kilo	22.50	-
Barbital-sodium, NF, 50-kilo dms. divd. ... kilo	23.00	-
Barite, dry-grd., Southern, off-color, coarse, bgs., c.l., f.o.b. mines lb.	.09	.11
water-grd., white, bgs., c.l., f.o.b. works ... lb.	.13	-
unbleached, extra-fine, pigment grade, c.l., f.o.b. works .. ton	160.00	-
Barium carbonate, precip., bulk, c.l., works, frt. equald. ... lb.	.25	-
bgs., same basis ... lb.	.25½	-
photo grade, bgs., same basis ton	510.00	-
Barium chlorate, 100-lb. dms., 1-10 dm. lots, works ... lb.	1.04	-
Barium chloride, tech., cryst., bgs., c.l., works ... ton	470.00	-
anhyd, drums c.l., same basis. ton	590.00	-
Barium chloride, purif., cryst. 400-lb. dms., works ... lb.	3.76	-
Barium monohydrate, 55-lb. bgs., c.l., t.l. f.o.b. works ... 100 lbs.	46.00	-
octahydrate, cryst., bgs., same basis ... 100 lbs.	33.00	-
Barium nitrate, 100-lb. bgs., t.l., works ... 100 lbs.	32.60	-
Barium oxide, grd., dms., c.l., divd. ... 100 lbs.	31.25	-
tote bins, same basis. .. 100 lbs.	30.00	-
Barium peroxide, 700-lb. dms., c.l., t.l., works ... lb.	.30	-
Barium stearate, bulk, t.l., f.o.b. dest. ... lb.	1.05	-
Barium sulfate, tech. (see Barite and Blanc fixe)		
Barium sulfate, USP, X-ray diagnosis grade, powd., 25 kilo bgs., 10,000 kilo lots ... lb.	.58½	-
Barium sulfide (black ash), dms., c.l., works ... ton	460.00	-
Basil Egyptian ... lb.	.67	.95
French ... lb.	.88	.90
Basil oil, Comores ... lb.	55.00	-
Basil oil, Egyptian ... lb.	62.00	-
Battery acid, t.l., f.o.b., works ... ton	52.00	70.75
Bauxite, calcined, refractory grade, 87½-88% Al_2O_3, Baltimore & Mobile ... metric-ton	229.28	-
Bay oil, NF, 50-55%, dms. ... lb.	11.00	-
Bayberry wax, bgs. ... lb.	2.70	3.00
Beeswax, refd., bleached white, bricks, 100-lb. ctns. ... lb.	3.10	3.20
white, slabs, 100-lb. ctns. ... lb.	3.05	3.10
yellow, bricks, 100-lb. ctns. ... lb.	3.00	3.10
yellow, slabs, 100-lb. ctns. ... lb.	2.95	3.05
Bentonite, dom., c.l. bags, f.o.b. works ... ton	43.50	-
Benzaldehyde, NF, dms. ... lb.	1.25	-
tech., dms., c.l., t.l. ... lb.	.73	.83
Prices are 4c. per lb. higher West of the Rockies.		
Benzene, indust. or nitration, barges, f.o.b.		
Baton Rouge, La. ... gal.	.98	-
Baytown, Tex. ... gal.	.98	-
Beaumont, Tex. ... gal.	.98	-
Catlettsburg, Ky. ... gal.	.98	-
Chicago district ... gal.	.98	-
Chocolate Bayou, Tex. ... gal.	.98	-
Clairton, Pa. ... gal.	.98	-
Corpus Christi, Tex. ... gal.	.98	-
Deer Park, Tex. ... gal.	.98	-
Houston district, spot ... gal.	1.00	-
Lima, Ohio ... gal.	.95	-
Wood River, Ill. ... gal.	.98	-
Benzene hexachloride, 99% gamma isomer (see Lindane).		
Benzidine orange, powd., bgs., divd. lb.	4.90	8.70
liq., containers, divd. ... lb.	3.36	3.89
Benzidine yellow, AAA, bgs., divd. . lb.	5.80	6.05
AAOA, bgs., divd. ... lb.	7.35	7.40
AAOT, bgs., divd. ... lb.	5.95	6.20
Benzocaine, USP, dms., 1,000 kg. lots, f.o.b. works ... kg.	10.00	11.50
Benzodihydropyrone, dms. ... lb.	12.50	-
Benzoic acid, tech., bgs., c.l., t.l., f.o.b. works ... lb.	.55	.58
USP cryst., dms., ton lots same basis ... lb.	1.73	1.75
Benzoin gum, Sumatra, cs. ... lb.	1.80	-
Benzophenone, N.F., 1,000 lbs. or more, f.o.b. ... lb.	3.50	3.60
NF, 1,000 kilos or more, f.o.b. ... kg.	7.45	-
tech, 1,000 kilos or more, fob works ... kgs.	4.35	-
2,2-Benzothiazyl disulfide (see Mercaptobenzothiazyl disulfide).		
Benzotriazole, flake, dms., 1,000 lbs. or more, f.o.b. works ... lb.	6.10	-
powd., dms., 1,000 lbs. or more, same basis ... lb.	6.20	-
photo-grade, dms., 1,000 lbs. or more, same basis ... lb.	9.90	-
Benzotrichloride, refd., dms. t.l., frt. equald. ... lb.	.87	-
tanks, frt. equald ... lb.	.80	-
Benzoyl chloride dms., c.l., works .. lb.	.57	.59
tanks, frt. equald. ... lb.	.74½	.75
Benzoyl peroxide, regular gran., 10,000-lb. lots or more, bgs., works, frt. equald. ... lb.	2.35	6.98
paste, 50% and 55% formulations, dms., pails, frt. equald ... lb.	1.71	1.95
Benzyl acetate, dms. ... lb.	1.00	1.25
Benzyl alcohol, N.F. t.l. dms. frt. equald. ... lb.	1.26	1.85
tanks, same basis ...	1.37	1.43
photo grade, t.l., dms., same basis ... lb.	1.40	-
tanks, same basis ...	1.34	-
tech. grade, t.l., dms., same basis lb.	1.32	-
tanks, same basis ...	1.26	-
Benzyl benzoate, dms. ... lb.	1.65	2.25
Benzyl chloride, tech., non-ret. dms., c.l., t.l., frt. equald. ... lb.	.59	-
tanks, f.o.b. ... lb.	.64	-
Benzyl cinnamate, 25-lb. cns. ... lb.	8.60	9.95
n-Benzyl-N,N-dimethylamine, t.l., dms., f.o.b. works ... lb.	2.30	-
Benzyl formate, dms. ... lb.	10.50	-
6-tert-Butyl-m-cresol (see Mono-tert-butyl-m-cresol).		
Benzyl isoeugenol, dms ... lb.	15.50	-
Benzyl propionate, dms. ... lb.	3.35	-
Benzyl salicylate ... lb.	2.90	3.25
Benzylidene acetone, cns., bots. ... lb.	2.95	3.25
Bergamot oil ... kilo	44.75	-
Betahydroxynaphthoic acid (see b-Oxynaphthoic acid).		
Biotin, cryst., 500 gms. or more ... gm.	5.00	5.50
Biphenyl (see Diphenyl).		
Bismuth nitrate, purif. cryst., 100-lb. dms., frt. equald. ... lb.	10.00	-
Bismuth oxychloride, 100-lb. dms., works ... lb.	17.20	-
Bismuth subcarbonate, USP, medium powd., 225-lb. dms., works. lb.	15.31	15.60
Bismuth subgallate, purif., 100-lb. dms., works ... lb.	10.50	-
Bismuth subnitrate NF, powd., 200-lb. dms., works ... lb.	14.45	-
Bismuth subsalicylate, purif. powd., 50-100 lb. dms., works ... lb.	17.00	-
Bismuth trioxide, reagent. powd., 100-lb. dms., works ... lb.	15.00	15.45
Bisphenol-A, epoxy grade, hopper cars, divd. ... lb.	.67	-
polycarbonate grade, same basis lb.	.71	-
Blanc fixe, syn., imp., bags ... lb.	.20	-
Bois de rose oil, Braz., dms. ... lb.	6.75	-
BON toner (red 48) dms., frt. alld. .. lb.	7.25	8.05
(red 52) dms., same basis ... lb.	6.50	7.90
Bonemeal, steamed, dom., bgs., c.l., f.o.b. Midwest plants ... ton	180.00	190.00
Bone phosphate, defluorinated of lime (see Defluorinated phosphate).		
Bone phosphate, precip. (see Calcium phosphate tribasic).		
Borax, tech. anhyd. 99%, bgs., c.l., works ... ton	647.00	-
bulk, c.l., works ... ton	602.00	-
Borax, tech., gran., decahydrate, 99½% bgs., c.l., works .. ton	237.00	-
bulk, c.l., works ... ton	192.00	-
tech., pentahydrate, gran. 99½%, bgs., c.l., works ... ton	265.00	-
bulk, c.l., works ... ton	220.00	-
Borax, NF (See Sodium borate).		
Boric acid, tech., gran., 99.9%, bgs., c.l., works ... ton	614.00	-
bulk, c.l., works ... ton	569.00	-
Boron trichloride, CP, 1,800-lb. cyls., works ... lb.	3.80	-
Boron trifluoride, 60-lb. cyls., t.l., f.o.b. works ... lb.	4.03	-
bulk, same basis ... lb.	3.47	-
Boron trifluoride, etherate, 500-lb. dms., t.l., f.o.b., works ... lb.	2.36	-
phenolate, 500-lb. dms., t.l., same basis ... lb.	1.65	-
Bromine, dms., t.l., works ... lb.	.87	-
bulk, 45,000-lb. min., works ... lb.	.33	.34½
purif., t.l., divd. ... lb.	.75	-
Bromine divd., prices for dms. and bulk shipped W. of Rockies, 1c.-per-lb. higher. Bulk t.t. prices 1c. to 2½c.-per-lb. higher for 30,000-lb. min. and 4c. to 5½c.-per-lb. higher for 15,000-lb. min.		
Bromochloromethane, dms., c.l., f.o.b. Midland ... lb.	1.12	-
Butadiene, tanks, f.o.b. ... lb.	.12½	.13
1,4-Butanediol, tanks, f.o.b., frt. equald. ... lb.	.80	-
dms., same basis ... lb.	.88	-
Butene-1, tanks, f.o.b. works ... lb.	.26	.28
n-Butyl acetate, syn., tanks, frt. alld. lb.	.52½	-
n-Butyl acrylate, tanks, frt. alld. E. .. lb.	.69	-
n-Butyl alcohol, syn., ferment, tanks, frt. alld. ... lb.	.34	-
sec-Butyl alcohol, syn., tanks, divd. lb.	.365	-
tert-Butyl alcohol, syn., tanks, divd. E. ... lb.	.70	-
Butyl aldehyde (see Butyraldehyde)		
Butyl benzyl phthalate, tanks, frt. alld. ... lb.	.59	-
Butyl chloride, tanks, works ... lb.	.99	1.00
Butyl cyclohexyl phthalate, tanks, divd. ... lb.	.74	-
n-Butyl ether, dms., c.l., t.l., works .. lb.	1.85	-
Butyl isodecyl phthalate, tanks, divd. ... lb.	.35	-
n-Butyl lactate, tanks, f.o.b. works . lb.	1.58	-
n-Butyllithium, 15% soln., 1,000-lb. lots or more, cyls., 100% basis, divd. ... lb.	15.45	-
tanks, 3,000-lb. min., 100% basis, divd. ... lb.	14.75	-
Butyl methacrylate, tanks, frt. equald. ... lb	.88	-
Butyl octyl phthalate, tanks, divd. E. ... lb.	.40	.42
Butyl oleate, dist., dms, c.l. ... lb.	.70	.82
tanks ... lb.	.60	.75
p-tert-Butylphenol, tanks works ... lb	70	-
Butyl phthalate (see Dibutyl phthalate).		
Butyl stearate cosmetic, dms., 77 dms. or more ... lb.	.91	.97
tanks ... lb.	.92	-
Butyl stearate tech., t.l. ... lb.	.60	.62
tanks ... lb.	.55	.58
Butylamine (see Mono-, Di- and Tributylamine).		
tert-Butylamine, dms., c.l., t.l., f.o.b. works ... lb.	1.31	-
tanks, same basis ... lb	1.17	-
Butylated hydroxyanisole, food grade, dms., divd. ... lb.	8.80	8.85
Butylated hydroxytoluene, food, feed grades, c.l., t.l., bgs., divd. . lb.	1.27	1.40
tech., bgs., c.l., t.l., divd. ... lb.	1.25	1.38
1,3-Butylene glycol, tanks, divd. ... lb.	.72	-
Butyraldehyde, tanks, divd. ... lb.	.29½	38
Butyric acid, tanks, frt. alld. ... lb.	.44½	-
Butyric ether (see Ethyl butyrate).		
Butyrolactone, tanks, f.o.b. plant ... lb.	1.20	-
n-Butyronitrile, dms., c.l., divd. ... lb.	.93	-
tanks, divd. ... lb.	.54	-

C

Cadmium chloride, purif. cryst., 100-lb. dms., t.l., works ... lb.	3.73	-
Cadmium, CP, red, dark shade, bbls., 100-lb. lots, frt. alld., E. of Rockies ... lb.	11.33	16.35
light shade, bbls., same basis ... lb.	9.16	12.08
medium shade, bbls., same basis. lb.	10.69	15.20
medium-light shade, bbls., same basis ... lb.	10.26	14.50
Cadmium, CP yellow, all shades, bbls., 100-lb. lots, frt. alld., E. of Rockies ... lb.	6.10	7.07
Cadmium fluoborate, liq. conc., dms., t.l., works, frt. equald. ... lb.	2.27	-
medium-light shade, bbls., same basis ... lb.	3.22	-
Cadmium-mercury lithopone, maroon shade, bbls., frt. alld. E. of Rockies ... lb.	4.60	-
Cadmium metal ingots or sticks, ton lots, cs., divd. ... lb.	1.20	1.50
Cadmium nitrate, purif., flake 400-lb. dms., c.l., t.l., f.o.b. ship. pt. lb.	2.10	-
Cadmium-selenide-lithopone, orange, light shade, bbls., 400-lb. lots, frt. alld. E. of Rockies ... lb.	3.97	4.00
deep shade, bbls., same basis. .. lb.	4.47	4.60
Cadmium-selenide lithopone, red, dark shade, bbls., same basis. . lb.	6.77	6.80
light shade, bbls., same basis ... lb.	5.27	5.30
medium light shade, bbls., same basis ... lb.	5.72	5.75
medium shade, bbls., same basis. lb.	6.37	6.40
maroon shade, bbls., same basis. lb.	7.47	-
Cadmium-selenide lithopone, yellow, all shades, bbls., same basis. . lb.	2.97	3.00
Cadmium sulfate, 50-lb. dms., any quantity, f.o.b. ship. pt. ... lb.	4.05	-
Caffeine, dom., USP, syn. cryst. anhyd., powd., 100-lb. dms., c.l., t.l., frt. alld. ... lb.	5.80	-
imp., cryst., anhyd., powd., dms., 10,000 lbs. or more ... lb.	5.80	-
Calamine, USP, dms. ... lb.	1.50	1.70
Calamus oil, dms. ... lb.	26.80	35.00
Calciferol. (see Ergocalciferol).		
Calcium acetate, purif., powd., dms, t.l., works ... lb.	.87	-
Calcium carbide, std., generator size, bulk, c.l., f.o.b., works, ... ton	402.00	-
Calcium carbonate, pulverized, 325-mesh, bgs., bulk, f.o.b. works ... ton	46.00	-
slurries, 64% solids, same basis ... ton	97.00	100.00
72% solids, same basis ... ton	109.27	-
quicklime, gran., ind., bulk, works ... ton	100.93	-
Calcium carbonate, coated, bgs., c.l., works ... lb.	.0830	.1600
Calcium carbonate, precip., bgs., c.l., t.l. ... ton	385.00	445.00
Calcium carbonate precip. medium, bgs., c.l., works. ... ton	110.00	150.00
precip. dense. bgs., c.l., surface treated, bgs., c.l., works .. ton	265.00	-
ultrafine, USP, bgs., c.l., works ... ton	217.00	225.00
Calcium chloride, conc., reg. grade. 77-80%, flake, bulk, c.l., works ... ton	153.00	-
100-lb. bgs., c.l., same basis ... ton	196.00	-
anhyd., 94-97%, flake or pellet, bulk, c.l., same basis ... ton	217.00	-
80-lb. bgs., c.l., same basis ... ton	279.00	-
brining grade, 80-lb. bags ... ton	285.00	-
Calcium chloride, liq., 100 percent basis, t.c., t.t., barge ... ton	99.75	-
45% same basis ... ton	118.00	-
Calcium chloride, USP, gran., 225-lb dms., t.l., frt. equald. ... lb.	.90	-
Calcium citrate, purif., 200-lb. dms., 10,000 lbs. or more, f.o.b. works ... lb.	3.82	-
Calcium cyanamide, indust., anhyd. dms., works ... ton	400.00	450.00
Calcium gluconate, USP powd. t.l. . lb.	1.80	-
Calcium hydride, lump, dms., 25-1,000-lb. lots, works ... lb.	10.50	13.25
Calcium hypochlorite, 100-lb. dms, truckloads ship, t. E. of Rockies ... 100 lbs.	92.40	-
Calcium hypophosphite, dms., bulk, 500 kilos or more ... kilo	13.75	14.50
Calcium iodate, FCC dms, f.o.b. works ... lb.	5.50	-
Calcium iodide, 50-kilo dms., f.o.b. works ... kilo	23.65	25.65
Calcium lactate, NF, powd., pentahydrate, dms., 24,000 lbs. or more, f.o.b. works ... lb	2.00	-
NF, gran., trihydrate, same basis. lb	2.10	-
special gran., dried grade, same basis ... lb.	2.80	-
Calcium naphthenate, liq., 4% Ca., c.l., f.o.b. plant, E. of Rockies . lb.	85	-
d-Calcium pantothenate, USP, 100-500-kilo lots ... kilo	12.50	-
dl-Calcium pantothenate, feed grade, f.o.b. frt. alld, 250 kilos or more ... kilo	8.00	8.50
dl-Calcium pantothenate, calcium chloride complex, feed grade, 160 grams per lb., f.o.b., frt. alld., 500 lbs or more ... lb.	2.75	-
Calcium phosphate, dibasic, feed grade, 18½% P bulk, c.l., t.l., f.o.b. works ... ton	228.00	-
Calcium phosphate, dibasic, dihydrate, USP, bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	62.50	-
anhyd., USP, same basis. . 100 lbs	71.75	-
dentifrice grade, same basis. 100 lbs.	49.90	-
Calcium phosphate, monobasic, monohydrate, food grade, bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	50.50	-
anhyd, food grade, same basis ... 100 lbs.	54.95	-
tribasic, NF precip., bgs., c.l., frt. equald. ... 100 lbs.	62.50	-
Calcium propionate, dms., 2,000 lbs. or more f.o.b. frt. alld. ... lb.	.50	.55
Calcium silicate, hydrated, bgs., c.l., works ... lb.	.07	-
Calcium silicate, paint grade (see Wollastonite).		
Calomel, NF, mild powd., 100-lb. dms., f.o.b. works ... lb.	8.50	-
Camphene chlorinated, 67-69% (see Toxaphene)		
Camphor, monobromated, dms., kgs. ... lb.	3.63	3.70
Camphor, syn., tech., 165-lb. dms., 5,000 lbs. or more ... lb.	1.80	-
USP, powd., 165-lb. dms., 5,000 lb. lots or more ... lb.	2.36	-
syn., refd., 1-oz. tablets, ctns. 1,000-lb. lots or more ... lb.	3.50	-
Camphor oil, yellow, 25-lb. dms ... lb.	1.65	-
white, dms. ... lb.	2.00	-
spec. grav., 1.070, dms. ... lb.	2.65	2.85
Cananga oil, Indonesian, dms. ... kilo	17.50	-
Candelilla wax, crude, bgs. ... lb.	1.90	-
refd. pure, bgs. ... lb.	2.10	-
Capric acid, coml, pure, dms. ... lb.	.60	.65
tanks ... lb.	.60	.65
Capric aldehyde (aldehyde C-10) dms., cns. ... lb.	3.95	5.35
Caprolactam monomer, flake, bgs., t.l., f.o.b. shipping point ... lb.	.87	-
molten, tanks, same basis ... lb.	.85	-
Capryl alcohol sec. 92-98% tanks, f.o.b. works ... lb.	.35	-
Caprylic acid, coml. pure tanks ... lb.	.73½	-
Capsicum (see Pepper, red).		
Capsicum oil (see Capsicum oleoresin).		
Capsicum oleoresin, NF, from dom., pepper, dms. ... lb.	11.00	-
NF, from African pepper, dms. 500,000 pungency ... lb.	9.00	-
1,000,000 pungency ... lb.	17.00	18.00
Caraway oil, Poland, dms. ... lb.	22.00	25.00
Caraway seed, Dutch, bgs. ... lb.	.54	-
Egyptian, bgs. ... lb.	.50	.53
Carbon black, furnace, fast extruding (FEF), bulk, c.l., works. ... lb.	.2125	-
bgs., c.l., works ... lb.	.2425	-
general purpose (GPF), bulk, c.l., works ... lb.	.2075	-
bgs., c.l. works ... lb.	.2375	-
high abrasion (HAF), high structure, bulk, c.l. works ... lb.	.2300	-
bgs., c.l. works ... lb.	.2600	-

CHEMICAL PRICES

WEEK ENDING DEC. 12, 1986

Carbon black, low structure, bulk, c.l. works ... lb.	.240	.260
bags, c.l. works ... lb.	.270	.290
intermediate-super-abrasion (ISAF) ... lb.	25	-
bgs., c.l. works ... lb.	.28	-
super-abrasion (SAF), bulk, c.l., works ... lb.	.31	-
bgs., c.l., works ... lb.	.4050	-
semi-reinforcing (SRF), bulk, c.l., works ... lb.	.210	-
bgs., c.l., works ... lb.	.240	-
Carbon black, thermal, medium, bgs. c.l., works ... lb.	.30	.30½
bulk, c.l. works ... lb	.32	.34½
Carbon black oil, barge, f.o.b. Gulf refineries ... bbls.	10.50	12.50
f.o.b. W. coast refineries ... bbls.	10.50	12.50
Carbon disulfide, t.c., f.o.b. works ton	420.00	-
Carbon tetrachloride, CP, consumers, dms, c.l., frt alld. ... lb.	.36	-
tech., dms., c.l., t.l, frt. alld. ... lb.	.31	-
tank transport (min. 4,000 gals) frt. alld. ... lb.	.24	-
Carboxymethyl cellulose (see CMC).		
Cardamom oil, NF, bots. ... lb	60.00	-
Cardamoms, decort, Guatemalan . lb.	2.90	-
green, Guatemalan, bgs. ... lb.	5.75	7.50
Carmine, No 40, NF, bulk, 100-lb lots or more, divd. ... lb.	135.00	140.00
Carnauba wax, Parnahyba, No 1, yellow, bgs, ton lots ... lb.	1.95	2.05
Ceara, No. 1, yellow, bgs., ton lots ... lb	1.75	1.90
North Country, No 2, refined, bgs., ton lots ... lb	1.55	1.65
Carnauba wax, North Country No 3, centrifuged, bgs., ton lots lb	1.10	-
North Country, No. 3, refined, bgs., ton lots ... lb	1.30	1.45
Powdered carnauba wax, 20 to 100 mesh, 20c per lb higher		
b-Carotene, in vegetable oil, semi-solid suspension, 400,000 A units per gram, 33 lbs. or more. lb.	32.75	-
b-Carotene, liq. in vegetable oil, 500,000 A units per gram, 33 lbs or more ... lb	40.75	-
b-Carotene, dry, beads, 10%, 167,000 A units per gram 50 lb cns lb	26.85	-
d-Carvone, 25-lb dms., syn ... lb	48.00	-
l-Carvone ... lb.	7.00	7.25
Cascara sagrada bark, bulk ... lb	1.00	-
Casein, imp, acid-precip., grd, 30-mesh, Australian, edible, same basis c.i.f. ... lb	1.45	-
Australian, indust, same basis c.i.f. ... lb	1.365	-
Cassella acid, 303 mol wt, dms frt alld, 100% basis ... lb	3.70	-
Cassia, Korintji "A" bgs ... lb	1.08	1.20
"B" bgs. ... lb	95	1.00
Cassia oil, Chinese, dms. ... lb	18.50	-
Castor oil, raw, No 1, Braz tanks ... lb	32	34
USP 5-9 dms. ... lb	74	-
refd. deod., 5-9 dms ... lb	.78	-
blown, 5-9 dms ... lb	.75	-
dehydrated, bodied, tanks ... lb.	74	-
dehydrated, unbodied, tanks ... lb.	65	-
Castor oil, acids dehydrated, dms ... lb.	1.10	-
ricinoleic acid ... lb.	79½	.83
Castor pomace, bgs, container load, f.o.b., Miami, Fla ... ton	154.00	-
Castoreum, nat, cns ... lb	18.00	35.00
syn., cns ... lb	11.00	-
Catechol, CP, 45-kilo dms, 50-239 dms., f.o.b ... kilo	7.93	-
tech., bgs, t.l, same basis ... kilo.	3.71	-
Caustic potash (see Potash, caustic)		
Caustic soda (see Soda, caustic)		
Cedarleaf oil, dms. ... lb.	17.50	-
Cedarwood oil, Texas, dms., cns. ... lb.	1.75	2.50
Virginia ... lb.	4.75	-
Cedrol, prime dms. ... lb.	5.25	-
Cedryl acetate, dist., dms. ... lb.	4.25	5.30
Celery seed, Indian, bgs. ... lb.	.46	-
Celery seed oil ... lb.	37.00	-
Cellulose acetate, powd., bgs., t.l., divd. E. ... lb.	1.30	-
Cellulose acetate butyrate, powd., 17% butyl content, bgs., t.l., divd. E. ...	1.75	-
38% butyl content, bgs., divd E. . lb.	1.59	-
50% butyl content, bgs., divd. E. . lb.	1.81	-
55% butyl content, bgs., divd. E. . lb.	1.63	-
Cellulose gum, pure, high vis., bgs., 24,000-lb. lots or more works, f.o.b. Hopewell, Va. ... lb.	1.60	1.70
std., low or medium vis., bgs., c.l., t.l., f.o.b. Hopewell, Va. ... lb.	1.60	1.90
Cerium concentrate CeO_2, 50 lbs. .. lb.	1.35	-
Cerium hydroxide 90% CeO_2, dms., works ... lb.	5.40	-
77% CeO_2, dms., works ... lb.	4.20	1.60
Cerium oxide, optical grade, bgs., 50-lb. lots or more, divd. ... lb.	1.85	1.90
Cetyl alcohol, NF, cns., c.l., t.l., divd. E. lb.	.68½	1.27
Chalk (see Calcium carbonate).		
Chamomile flowers, Hungarian, cs. . lb.	4.25	4.50
Roman, cs ... lb.	4.94	-
Egyptian, whole ... lb.	2.70	3.00
Chamomile oil, blue, Egyptian ... lb.	545.00	-
blue, Hungarian ... lb.	370.90	-
Chenopodium oil, NF, cns. ... lb.	15.00	-
Chicago acid, dry, bbls., frt. alld. ... lb.	13.50	-
Chilies (see Pepper, red).		
Chlorendic anhydride, tech., dms, t.l., works ... lb.	1.30	-
Chlorinated paraffin, 40% chlorine, bulk, divd., Zone 1 ... lb.	.45	.48½
50% chlorine, same basis ... lb.	.46	.47½
60% chlorine, same basis ... lb.	.46½	.48½
70% chlorine, resinous, 50-lb. bgs., c.l., divd., Zone 1 ... lb.	.89	-

ABBREVIATIONS

THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

a/alpha
alld./allowed
amorph./amorphous
AMP/American melting point
anhyd./anhydrous
AOAC/Association of Official Agricultural Chemists
a.p.a./available phosphoric acid
approx./approximately
artif./artificial
ASTM/American Society for Testing & Materials

b/beta
Be/Baume
bbls./barrels
b.g./beta-gamma
bgs./bags
bls./bales
bots./bottles
b.p./boiling point
b.p.l./bone phosphate of lime
b.r./boiling range
bxs./boxes

C./Centigrade
cbys./carboys
c.c./cubic centimeters
CD/completely denatured
c.i.f./cost insurance freight
c.l./carload
cns./cans
coml./commercial
conc./concentrated
cp/chemically pure
cps./centipoises
cryst./crystalline
cs./cases
ctns./cartons
cyls./cylinders

d-/dextro
dbl./double
denat./denatured
dest.-dist./destructively distilled
dl/dextro-laevo
dist./distilled
distr./distributor
divd./delivered
dms./drums
dom./domestic

E/East
e.p./end point
equald./equalized
exp./expressed
extr./extracted

F./Fahrenheit
f.a.s./free alongside
ferment./fermentation
f.f.a./free fatty acid
f.f.c./free from chlorine
f.f.p.a./free from prussic acid
fib./fiber
f.o.b./free on board
f.p./freezing point
frt./freight

g-/gamma
gal./gallon
g.p./general purpose
gran./granular
grd./ground

i.b.p/initial boiling point
imp./imported

incl./included
indust./industrial

kgs./kegs

l-/laevo
lb./pound
l.c.l./less carload
l.t.l./less truckload
liq./liquid

m-/meta
m.a.p./mixed aniline point
mcg./microgram
mfrs./manufacturers
min./minimum
molt./molten
m.p./melting point

N/nitrogen
n-/normal
nat./natural
neut./neutral
NF/National Formulary
No./number
Nom./nominal

o-/ortho
ord./ordinary
oz./ounce

P/phosphorus
p-/para
Pac./Pacific
pf./proof
phos./phosphate
photo/photographic
pkgs./packages
powd./powdered
precip./precipitated
prod./producer
pt./point
pulv./pulverized
purif./purified

redist./redistilled
refd./refined
refy./refinery
resub./resublimed
ret./returnable

SD/specially denatured
s.d./single distilled
SE/Southeast
sec./secondary

secs./seconds
sp.g./specific gravity
shipt./shipment
soln./solution
std./standard
syn./synthetic

tanks/railroad tankcars
tech./technical
tert./tertiary
t.l./truckload
ton/refers to short ton of 2,000 pounds
TVA/temporary voluntary allowance
t.w./tankwagons

USP/United States Pharmacopeia

vis./viscosity
VM&P/varnish makers & painters

W/West
whse./warehouse
w.w./water-white

NOTE: A unit-ton is 1 percent of 2,000 pounds of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the unit-ton price shown in Chemical Marketing Reporter gives the price of 2,000 pounds of the material.

CHEMICAL PRICES

WEEK ENDING DEC. 12, 1986

Chlorinated paraffin, Zone 2 prices are 1c. per lb. higher and Zone 3 prices are 2c per lb. higher and t.l. drum prices are 5c per lb. higher

Chlorinated rubber, 5, 10, 20 cps., bgs, t.l., divd. ... lb.	1.66	-
40 cps, bgs., t.l., divd. ... lb.	1.92	-
125 cps., bgs., t.l., divd. ... lb.	2.60	-
300 cps., bgs., t.l., divd. ... lb.	2.75	-
Chlorine, tanks single units works, f.o.b., frt. equald. ... ton	195.00	200.00
Chloroacetic acid, mono, high purity, flake, 99% bulk f.o.b. works ... lb.	.56	-
2-Chloro-4-aminotoluene, tech., liq., dms., c.l., t.l., f.o.b. works . lb.	1.86	-
o-Chloroaniline, liquid, dms., c.l., f.o.b. works ... lb.	1.63	-
tanks, same basis ... lb.	1.55	-
p-Chloroaniline, solid, c.l., t.l., f.o.b. lb.	1.70	-
flake, dms., c.l., same basis ... lb.	2.00	-
o-Chlorobenzaldehyde, dms., t.l., works ... lb.	2.45	-
p-Chlorobenzaldehyde, dms., 2,000 lbs. or more, works ... lb.	3.84	3.85
o-Chlorobenzoic acid, dms. l.t.l. wks. . lb.	3.90	-
p-Chlorobenzoic acid, dms., 500-lb. lots or more, works ... lb.	1.69	2.25
Chloroform, tech. tanks, distr. divd. ... lb.	.34½	-
tech., consumers, tanks, divd. ... lb.	.34½	-
NF tanks, min., consumer, 4,000 gals. divd. ... lb.	.35½	-
2-Chloro-4-nitroaniline, paste, commodity basis, dms., t.l., f.o.b. ... lb.	3.06	-
powd., same basis ... lb.	3.15	-
4-Chloro-2-nitroaniline, paste, 172.5 mol. wt., commodity basis, dms., t.l., f.o.b. ... lb.	2.25	-
powd., same basis ... lb.	2.70	-
o-Chlorophenol, dms., c.l., frt. equald. ... lb.	2.00	2.40
p-Chlorophenol, dms., c.l., frt. equald. ... lb.	1.25	1.70
Chloropicrin, coml., 1,500-lb. cyls., t.l., f.o.b. works ... lb.	1.25	-
Chlorosulfonic acid, tanks, frt. equald. ... lb.	.18½	-
p-Chlorotoluene, tech., tanks, works ... lb.	1.00	-
Cholecalciferol, dry, 40,000,000 units per gram, kilo lots ... gm.	24.00	-
Choline bitartrate, cryst., 98% min., 50 kilo dms., f.o.b. Springfield, Mo. ... kilo.	6.90	-
Choline chloride, feed grade, 70% aqueous, t.c., t.t., divd. E of Rockies ... lb.	.28	-
60% dry supplement ... lb.	.39	-
Choline chloride, 60% dry supplement, bulk hopper cars ... lb.	.39	-
bgs., 50,000 lbs. min ... lb.	.40	-
Choline chloride, pharmaceutical, 50 kilo, lots, f.o.b. Springfield, Mo. ... kilo.	5.00	-
Choline dihydrogen citrate, 98% min., 50 kilo lots, f.o.b. Springfield, Mo. ... kilo.	6.00	-
Chrome green, CP extra light, bgs., divd. E. of Rockies ... lb.	1.68	-
light, bgs., same basis ... lb.	1.70	-
medium, bgs., same basis ... lb.	1.72	-
extra deep, CP., same basis ... lb.	1.74	-
Chrome orange, CP, bgs., divd. E. of Rockies ... lb.	.83	.89
Chrome yellow CP bbls., divd. E. of Rockies ... lb.	1.09	1.18
Chromic acid, 99¾%, flake dms., c.l., frt. equald. ... lb.	1.18	-
grd., same basis ... lb.	1.25	-
Chromium aceate, soln., 7½%, dms., 500-2,000-lb. lots, works ... lb.	.10	-
Chromium fluoride, dms., t.l., works ... lb.	.81	-
Chromium nitrate, dms., t.l., f.o.b. ... lb.	1.45	-
10% metal soln., 500-lb. dms. same basis ... lb.	.74	.86
Chromium oxide, hydrated, 50-lb. bgs., c.l. ... lb.	5.50	-
pure, bgs., c.l. ... lb.	1.90	2.00
Cinnamic aldehyde, cns., dms. ... lb.	1.85	1.95
Cinnamic alcohol, 25-lb. cns. ... lb.	4.60	-
Cinnamon, H2 ... lb.	1.00	1.05
Cinnamon bark oil, bots. ... lb.	105.00	110.00
Cinnamon leaf oil, dms. ... lb.	2.65	-
Citral, nat., dms. ... lb.	5.50	6.65
syn., 55-gal. dms. f.o.b. ... lb.	3.16	-
Citric acid, USP, hydrous, gran., 250-lb. dms., t.l. ... lb.	1.19	-
Citric acid, USP, anhyd., gran. 250-lb. dms., t.l., del. ... lb.	.86	-
Citric acid anhyde, powder bc. higher		
Citronella oil, Java, dms. ... lb.	2.60	-
China, dms. ... lb.	2.50	-
Citronellal, 25-lb cans ... lb.	3.85	7.40
Citronellol drums, f.o.b. ... lb.	3.66	-
Citronellyl acetate, dms. ... lb.	5.50	6.50
Citronellyl formate, 25-lb. cns. ... lb.	6.85	-
Civet, artif., bots. ... lb.	20.00	-
nat. ... lb.	400.00	-
Clay ball, dom. air floated, bgs., c.l., Tenn. ... ton	49.00	-
dom., crushed, moisture-repellent, bulk, c.l., Tenn. ... ton	24.00	-
Clay China (see Kaolin).		
Cleaners, naphtha, 140° flash tanks., New Jersey or New York, divd. ... gal.	1.40	-
Clove leaf oil Indonesian, reg. dms. kilo	3.15	-
Madagascar, reg. ... kilo	3.40	-
Clove bud oil ... kilo	25.00	26.00
Cloves, Brazil ... lb.	2.10	-
Zanzibar ... lb.	2.10	-
Madagascar ... lb.	2.10	-

CMC, technical, 96% minimum, low or medium vis., bgs., 24,000 lbs., f.o.b. Hopewell, Va., 100% basis ... lb.	1.25	-
detergent makers, f.o.b. manufacturing point ... lb.	.64	-
CMC, purif., high vis., (see Cellulose gum).		
Coaltar pitch, indust., liq., works . ton.	250.00	255.00
roofing, 140-155, Federal specification RP-381 Type 1, bulk works ... ton	350.00	-
Cobalt acetate, dms., t.l., frt. alld. .. lb.	3.61	4.25
Cobalt carbonate, powd., dms., frt. alld. ... lb.	6.61	8.16
Cobalt chloride, dms., 5,000 lbs. or more, ft. equald. ... lb.	4.15	-
Cobalt hydrate, dms., t.l., frt. alld. .. lb.	8.20	10.55
Cobalt metal, 99.5-99.9%, 250-kilo. dms., f.o.b. NY, Chicago . lb.	11.70	-
Cobalt naphthenate, liq., 6% Co., dms., divd. ... lb.	2.06	-
Cobalt nitrate, dms., t.l., frt. alld. ... lb.	2.74	3.45
Cobalt oxide, Imp., black, 72-73% Co. ... lb.	9.51	-
Cobalt oxide, Imp., 70-71% Co. ... lb.	9.78	-
Cobalt phosphate powd. 32.1% Co., dms., divd. ... lb.	1.35	-
Cobalt resinate fused, 3% Co., dms. ... lb.	.36½	-
Cobalt sulfate, cryst., bgs., 10,000 lbs. or more, frt. alld. E. ... lb.	2.81	3.54
monohydrate, dms., frt. alld. ... lb.	4.56	6.02
Cobalt tallate, 6% Co., dms., divd. . lb.	2.16	-
Cocillana bark, bls. ... lb.	.40	.45
Cocoa butter, spot ... lb.	2.05	-
Coconut oil (See Oils, Fats & Waxes market report.).		
Coconut oil acids, distilled, t.c., f.o.b. ... lb.	.52	.58
double distilled, same basis ... lb.	.54	.63
Cod oil, f.o.b., Gloucester, Mass., bulk ... gal.	6.50	-
Codeine alkaloid, NF, 25-kilo lots, .kilo.	900.00	-
Codeine phosphate, USP, cns., 25-kilo lots ... kilo	640.00	-
Codeine sulfate, NF cns., 25-kilo lots ... kilo	775.00	-
Codliver oil, NF, dms. ... gal.	6.60	7.25
Copaiba balsam, dms. ... lb.	1.50	-
Copaiba oil, cns., dms. ... lb.	3.75	-
Copper acetate, monohydrate, cryst., tech., dms., t.l., works ... lb.	.71	.74
Copper bromide, (cupric) 200-lb. dms., 100,000-lbs. -per-year contracts, works ... lb.	1.34	-
Copper carbonate, 55% Cu, dark, dense, 50-lb. bgs., c.l., t.l., works ... 100 lbs.	108.30	-
light, fluffy, 50 lb. bags, c.l., t.l., works ... 100 lbs.	109.30	-
Copper chloride (cupric), anhyd., c.l., works ... lb.	.90	-
Copper cyanide, tech. dms., 24,000-lb. lots or more ... lb.	2.30	2.62
Copper fluoborate, (cupric), liq. conc., dms., t.l., works, frt. equald. ... lb.	.82	-
Copper gluconate, FCC grade, 25-lb. dm., frt. equald. ... lb.	6.50	-
Copper metal electrolytic wire bars, divd., domestic, basis ... lb.	.62½	-
Copper naphthenate, liq., 8% Cu., dms., frt. alld. ... lb.	1.19	-
Copper nitrate (cupric), purif., flake, dms., t.l., works ... lb.	.43¼	-
Copper oleate, solid, 8% Cu. dms., works frt alld. ... lb.	.97	-
Copper oxide, black (cupric), dms., 80,000-lb. lots, works ... lb.	1.21	-
red (cuprous), dms., 97%, USN Type 1, (AA), 80,000-lb. lots, works ... lb.	1.19	1.20
red, 90%, Type 2, same basis ... lb.	1.15	-
Copper-8-quinolinolate, 10%, liq. emulsion, t.l., divd. ... lb.	2.52	-
Copper sulfate, cryst., pentahydrate, 99% bgs., c.l., f.o.b. works ... 100 lbs.	46.45	-
CP, pentahydrate, cryst., dms., l.c.l., works ... 100 lbs.	60.00	-
monohydrated, 35% Cu, dms., c.l., works ... 100 lbs.	75.10	-
basic, bgs., c.l., works ... 100 lbs.	88.30	-
Coriander oil, USP, dms. ... lb.	32.00	34.00
Coriander seed Moroccan ... lb.	.36	-
Rumanian ... lb.	.36	.37
Corn oil (See Oils, Fats & Waxes market report).		
Corn oil, crude, foots (soapstock), 95% acid; New York ... lb.	.13½	.14
Corn oil acid, dms. ... lb.	.50	-
tanks ... lb.	.32	.40
Corn syrup 43 Be., tanks, f.o.b. works ... 100 lbs.	11.22	11.43
Cortisone acetate, USP, dms., 5 kilos or more ... gram.	.80	-
Cottonseed meal (See Oils, Fats & Waxes market report.)		
Cottonseed oil (See Oils, Fats & Waxes market report.)		
Cottonseed oil, acidulated (soap stock), acid. 95%, tanks, N.Y. ... lb.	.13	-
Cottonseed oil acids, dist., dms. ... lb.	.63	-
tanks ... lb.	.55	-
Coumarin, NF X, cryst., over 600-lb. lots ... lb.	6.00	6.20
Cream of tartar (see Potassium bitartrate).		
Creosote, coaltar, grade 1, tanks, f.o.b. works ... gal.	1.15	1.18
soln., 80/20, tanks, same basis . gal.	1.134	1.17
p-Cresidine, fused, dms., works ... lb.	4.31	-
m-Cresol, 95-98%, dms., t.l., f.o.b. . lb.	1.71	-
tanks, same basis ... lb.	1.65	-
m,p-Cresol, 99%, dms., t.l., f.o.b. ... lb.	.94	-
bulk, same basis ... lb.	.82	-
o-Cresol, 99% pure, dms., t.l., f.o.b. lb.	.87	-
bulk, same basis ... lb.	.75	-
98% pure, dms., t.l., f.o.b. ... lb.	.87	-
bulk, same basis ... lb.	.75	-
p-Cresol, 98%, dms., t.l., f.o.b. ... lb.	1.22	-
bulk, same basis ... lb.	.95	1.15
Cresylic acid, coaltar, dom., metapara content above 25%, resin and tricresyl phosphate grades, tanks, frt. alld. ... lb.	.58	-
Cresylic acid, dom., metapara content 25% or less, tanks, frt. alld. lb.	.58	-
Crotonic acid, 200-lb. dms., t.l., f.o.b. divd. ... lb.	1.50	-
Cryolite syn., bulk, c.l., works ... ton	510.00	550.00

Cube root, powd., 5% rotenone, basis, 50-lb. bgs., t.l., works ... lb.	.60	-
Cumene, bulk, contract, f.o.b. ... lb.	.15¼	.15¼
Cumin seed, Indian, bgs. ... lb.	.95	-
Iranian, bgs ... lb.	.99	-
Cyanuric acid, dms., c.l., t.l. frt. equald. ... lb.	1.16	1.37
Cyclamen aldehyde, 50% min. aldehyde content, dms. ... lb.	4.85	-
98.5%, dms. ... lb.	7.35	9.20
90-92%, dms. ... lb.	7.85	-
Cyclohexane, bulk, barges, wks. . gal.	1.08150	1.09150
Cyclohexanol tech., tanks, f.o.b. ... lb.	.52	.66½
Cyclohexanone tech., tanks, f.o.b. works ... lb.	.55½	.58½
tanks, divd. ... lb.	.565	-
Cyclohexylamine, tech., tanks, works ... lb.	.85	-

D

2,4-D acid, tech., 50-lb. bgs., c.l., t.l., works, frt. equald. ... lb.	1.10	1.25
2,4-D butyl ester, tech., 55-gal. dms., c.l., t.l., works, frt. equald. . lb.	1.30	-
tanks, same basis ... lb.	1.25	-
2,4-D dimethylamine salt, t.c., t.t. works, frt. alld. ... gal.	8.05	-
Decyl alcohol, mixed isomers, tanks, divd. ... lb.	.32	-
perfume grade, dms. ... lb.	.75	-
Defluorinated phosphate (tricalcium), feed grade, 18% P, c.l., bulk, f.o.b. works ... ton	195.00	228.00
Denatured alcohol, ethyl, CD18, CD19, tanks, divd. E. ... gal.	1.87	-

NOTE: Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.

Denatured alcohol, ethyl,		
SD2B, tanks, divd. E. ... gal.	1.81	-
SD3A, tanks, divd. E. ... gal.	1.76½	-
SD23A, tanks, divd. E. ... gal.	1.86	-
SD23H, tanks, divd. E. ... gal.	1.89	-
SD29, tanks, divd. E. ... gal.	1.83	-
SD30, tanks, divd. E. ... gal.	1.72½	-
SD35A, tanks, divd. E. ... gal.	1.88½	-
Denatured alcohol, ethyl, brucine formula SD40, tanks, divd. E. ... gal	1.83	-
ethyl, optional formula, SD40, tanks, divd. E. ... gal.	1.82½	-

For anhyd. alcohol on above formulae, prices are 12c. per gal. higher.

West Coast divd. prices are the same as Eastern prices, except in Idaho, Oregon and Washington where a 5c. differential on tankcars is maintained.

Desoxyephedrine hydrochloride (See Methamphetamine hydrochloride)		
Detergent alkylate, straight chain dodecylbenzene, tanks, barges, f.o.b. ... lb.	.45	-
Dextrin, corn, canary dark, paper bgs., c.l., works ... 100 lbs.	28.04	-
white, paper bgs., c.l., works ... 100 lbs.	27.43	-
Dextrose, anhyd., coml., bgs., c.l., divd. New York ... 100 lbs.	41.10	-
USP special, 100-lb. bgs., c.l., divd. New York ... 100 lbs.	46.50	-
Dextrose, hydrated coml, bgs., c.l., divd. New York ... 100 lbs.	24.25	-
Western zone ... 100 lbs.	25.60	-
Diacetone alcohol, acetone free, tanks, divd. ... lb.	.52	-
Diacetyl, flavor grade, dms. ... lb.	9.25	15.00
Diammonium phosphate, fert. grade. min. 18% N, 46% P. bulk, c.l., f.o.b. Fla. works ... ton	140.00	145.00
Diammonium phosphate, feed grade, 18% N, 20% P, bulk. c.l., f.o.b. Fla. works ... ton	240.00	-
bgs., same basis ... ton	250.00	-
Diammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	52.50	-
food grade, bgs., c.l., t.l., same basis ... 100 lbs.	57.75	-
2,4-Di-tert-amylphenol, min. 95.5%, dms., c.l., t.l., works ... lb.	1.04	-
tanks, works ... lb.	.97	-
Diarylide yellow, OT, (yellow 14). dms., frt. alld. ... lb.	7.00	8.00
o-Dianisidine dihydrochloride, 100%, MW 244, dms., t.l., divd. .. lb.	4.25	-
2,6-Di-tert-Butyl-p-Cresol (see Butylated hydroxytoluene)		
Dibutyl fumarate, tanks, f.o.b. works ... lb.	.77	.85
Dibutyl maleate tanks, f.o.b. works. lb.	.63	.64
Dibutyl phthalate, tanks, works ... lb.	.54	.60
Dibutyl sebacate tanks, works ... lb.	1.72	1.89
Dibutylamine, dms., c.l., divd. ... lb.	1.12	-
tanks, same basis ... lb.	1.06	-
2-5-Dichloroaniline, flake, dms., works ... lb.	2.00	-
fused, dms., works ... lb.	1.80	-
3,4-Dichloroaniline, tech. 88%, solid, dms., c.l., t.l., f.o.b. works . lb.	1.46	1.57
o-Dichlorobenzene, tech., 80%, dms., c.l., t.l., divd. ... lb.	.52	-
tanks, same basis ... lb.	.45	-
98% refd., dms., c.l., same basis . lb.	.54	-
tanks, same basis ... lb.	.47	-
p-Dichlorobenzene, graded, 300-lb. dms., t.l., f.o.b., frt. equald. lb.	.51	.52
tanks, liq., same basis ... lb.	.43	.47
2,6-Dichloro-4-nitroaniline, dms., 10,000 lbs. or more, works. lb.	3.30	-
Dichlorophenoxyacetic acid (see 2,4-D).		
Dicyclohexylamine, dms., c.l., t.l., f.o.b. ... lb.	1.35	-
tanks, same basis ... lb.	1.25	-
Dicyclohexyl phthalate, bgs., c.l., t.l., divd. ... lb.	1.25	-
Dicyclopentadiene, high-purity, 97-98%, tanks, works ... lb.	.35	-
Diethanolamine, tanks, frt. alld. ... lb.	.34	.36
Diethanolamine lauryl sulfate, tanks, frt. alld. ... lb.	.41	-
DDVP (see Dimethyl dichlorovinyl phosphate).		
Diethyl barbituric acid (see Barbital).		

Diethyl carbonate, tankwagons, f.o.b. works ... lb.	1.40	-
Diethyl ethanolamine, CP dms., c.l., divd. ... lb.	1.18	-
tanks, divd. ... lb.	1.10	-
Diethyl ethanolamine tech., 8c. per lb. lower.		
Diethyl oxalate, dms., c.l., f.o.b. works ... lb.	1.80	-
Diethyl phthalate, tanks, f.o.b. ... lb.	.69	.86
odorless cosmetic grades, t.l., works ... lb.	.97½	-
Diethyl sulfate, tanks., frt. alld. E. ... lb.	.59	-
Diethyl thiourea, dms., c.l., t.l., works ... lb.	2.46	-
Di-2-ethylhexyl adipate (see Dioctyl adipate).		
Diethyl toluamide, 95-97% min. meta isomer, dms., t.l., f.o.b. works ... lb.	2.75	-
N,N-Diethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. ... lb.	3.18	-
tanks, same basis ... lb.	3.10	-
Diethylamine, dms., c.l., divd. ... lb.	1.16	-
tanks, same basis ... lb.	1.02	-
N,N-Diethylaniline, dms., c.l., t.l., f.o.b. works ... lb.	1.83	-
tanks same basis ... lb.	1.75	-
Diethylbenzene, tanks, f.o.b. works lb.	.98	-
Di-2-ethylhexyl azelate (see Dioctyl azelate).		
Di-2-ethylhexyl phthalate (see Dioctyl phthalate).		
Diethylene glycol, tanks, divd. E. ... lb.	.29½	.31½
Diethylene glycol monobutyl ether, dms., c.l., frt. alld. E. ... lb.	.65	-
tanks, frt. alld. E. ... lb.	.57	-
Diethylene glycol monoethyl ether, dms., c.l., frt. alld. E. ... lb.	.64	-
tanks, frt. alld. E. ... lb.	.56	-
Diethylene glycol monomethyl ether, dms., c.l., frt. alld. ... lb.	.62	-
tanks, frt. alld. ... lb.	.54	-
Diethylene glycol monobutyl ether acetate, dms., c.l., divd. E. .. lb.	.80	-
tanks, divd. E. ... lb.	.72	-
Diethylene glycol monoethyl ether acetate, dms., c.l., frt. alld. E. lb.	.80	-
tanks, frt. alld. ... lb.	.72	-
Diethylenetriamine, tanks, f.o.b. works ... lb.	1.60	1.61
Diethylenetriamine pentaacetic acid, pentasodium salt solution, tank- cars/tanktrucks, frt-equalized ... lb.	.45	-
Digitoxin, USP, Imp., bots. ... gram	2.80	3.00
Diglycol laurate, dms., ton lots ... lb.	.32½	-
Diglycol stearate, dms., t.l. ... lb.	.62	.73
Dihydrazine sulfate, dms., works ... lb.	1.10	1.25
Dihydrostreptomycin sulfate, bulk kilo.	48.00	-
Dihydroxyacetone, 50-kilo lots, works ... kilo.	40.00	-
Di-isobutyl ketone, tanks, divd. ... lb.	.60	-
Di-isobutyl phthalate tanks, divd. E. lb.	.55	.57
Di-isobutylene, tanks, f.o.b. Houston ... lb.	.37	-
Di-isodecyl phthalate, tanks, divd. .. lb.	.40	[illegible]
Di-isononyl phthalate, tanks, divd. . lb.	.40	-
Di-iso-octyl azelate, tanks, divd. E. . lb.	.99	1.07
Di-iso-octyl phthalate, tanks, divd. . lb.	.40	-
Di-isopropanolamine, dms., c.l., frt. alld. ... lb.	.66½	-
tanks, same basis ... lb.	.58½	-
Di-isopropylamine, dms., c.l. divd. .. lb.	1.17	-
tanks, same basis ... lb.	1.07	-
Dilauryl 3,3-thiodipropionate, dms., t.l., frt. alld. ... lb.	1.89	-
Dill oil, USP, dms. ... lb.	7.00	8.25
Dimethyl anthranilate, dms. ... lb.	15.80	-
Dimethyl benzyl carbinyl acetate, 25-lb. dms. ... lb.	6.95	-
Dimethyl carbonate, dms, t.l., f.o.b. works ...	.90	-
Dimethyl dichlorovinyl phosphate, 55-gal. dms., f.o.b. ... lb.	1.80	1.90
Dimethyl ethanolamine, anhyd., dms., c.l., divd. E. ... lb.	1.15	1.18
tanks, divd. E. ... lb.	1.07	1.10
Dimethyl ether, aerosol grade, tanks, divd ... lb.	.38	-
Dimethyl phthalate, tanks, f.o.b works ... lb.	.65	-
Dimethyl sebacate, tanks, f.o.b works ... lb.	2.48	2.65
Dimethyl sulfate, ret. dms., c.l., f.o.b. works ... lb.	.57	-
tanks ... lb.	.46	-
Dimethyl sulfide, tanks, works ... lb.	.58	-
Dimethyl sulfoxide, tanks, works .. lb.	.78	-
Dimethylacetamide, bulk f.o.b. ... lb.	.87½	-
Dimethylamine, 25% soln., tanks, frt. equald., 100% basis ... lb.	.63½	-
40% soln., tanks, frt. equald., 100% basis ... lb.	.63½	-
anhyd., tanks, frt. equald. ... lb.	.54½	-
N,N-Dimethylaniline, t.l., f.o.b. ... lb.	1.03	-
t.l. dms. ... lb.	1.11	-
N,N-Dimethylformamide, dms., c.l., t.l., f.o.b., works ... lb.	.57	-
tanks, same basis ... lb.	.49	-
2,4-Dinitroaniline. tons-lots, f.o.b. .. lb.	1.22	-
Dinitroaniline, orange toner, CP, bgs., divd. E. of Rockies ... lb.	6.20	-
2,4-Dinitrochlorobenzene, crystalizing at 47°, t.l., f.o.b. Charlotte, N.C. ... lb.	.96	-
2,4-Dinitrophenol, 250-lb. dms., f.o.b. Charlotte, N.C. ... lb.	1.95	-
Dinitrotoluene, mix., tech. f.o.b. works ... lb.	.30	.43
2,4-Dinitrotoluene, dms., c.l., t.l., works ... lb.	1.25	-
tanks, works ... lb.	1.20	-
Dioctyl adipate, tanks, frt. alld. E. .. lb.	.61	.70
Dioctyl azelate, tanks, divd. E. ... lb.	.99	1.04
Dioctyl phthalate, tanks, divd. ... lb.	.40	.45
Dioctyl sebacate, 99%, tanks, f.o.b. works ... lb.	1.47	-
1,4-Dioxane, tanks, frt. alld. E. ... lb.	1.19	-
t.l., same basis ... lb.	1.21	-
Dipentaerythritol, bgs., c.l., t.l., divd. E. ... lb.	1.42	-
Dipentene steam-dist., tanks, f.o.b. Fla. works ... lb.	.25	.30
sulfate turpentine derived, tanks . lb.	.25	.28
Dip oil (see Tar acid oil).		
Diphenhydramine hydrochloride. USP, dom., 1,000-kilo lots, dms., divd. ... kilo.	20.00	24.00
Diphenyl, 99.9%, bgs., c.l., t.l., works ... lb.	.74	-
tanks, works ... lb.	.65	-

Diphenyl oxide, tech. grade, tanks . lb.	1.11	1.20
Diphenylamine, refd., flake, bgs., t.l., works, frt. equald. ... lb.	1.25	-
molten, tanks, works ... lb.	1.00	-
octylated, flake, bgs., t.l., f.o.b. works ...	7.68	-
Diphenylguanidine, bgs., t.l., frt. alld ... lb.	2.52	-
Diphenylhydantoin-sodium USP, dms. ...	5.00	5.60
Diphenylmethane 4,4-di-isocyanate, polymeric, bulk, c.l., min. frt. alld. ... lb.	.91	-
Dipropylene glycol, tanks, f.o.b. ... lb.	.40½	.42½
Dipropylene glycol monomethyl ether, dms., c.l., divd. ... lb.	.54	-
tanks, same basis ... lb.	.46	-
Di-o-tolylguanidine, powd., dms., t.l., frt. alld ... lb.	2.92	-
Di-o-tolylthiourea, tech., solid, dms., t.l., frt. alld. ... lb.	3.11	-
Diundecyl phthalate, tanks, divd ... lb.	.64	.65
Diundecyl phthalate, tanks, divd. . lb.	.61	.65
Divinylbenzene, 100% basis, tanks works ... lb.	2.75	2.60
dms, 100% basis ... lb.	3.00	2.70
1-Dodecanol, syn., tanks, f.o.b. ... lb.	.76½	-
Dodecenyl succinic anhydride, dms., c.l., t.l., divd. ... lb.	.88	-
Dodecylbenzene (see Detergent Alkylate).		
Dodecylphenol, tanks, min. frt. alld. E ... lb.	.48	.53
Dyes, coaltar, certified colors for food, drugs and cosmetics, 100 lb. and over. frt. prepaid or alld.		
Blue, FD&C, No. 1 ... lb.	21.20	22.60
No. 2 ... lb.	29.15	29.22
Green, FD&C, No. 3 ... lb.	49.50	65.00
Red, FD&C, No. 3 ... lb.	24.00	24.50
Yellow, FD&C, No. 5 ... lb.	7.45	7.85
No. 6 ... lb.	6.45	6.75
Dyes, coaltar, certified colors for drugs and cosmetics. 100-lb. lots divd.		
Green, D&C, No. 5 ... lb.	38.50	-
No. 6 ... lb.	42.80	-
Red, D&C, No. 4 ... lb.	18.85	-
No. 17 ... lb.	38.90	-
No. 19 ... lb.	38.25	-
No. 22 ... lb.	12.45	-
No. 28 ... lb.	59.95	-
No. 33 ... lb.	48.95	-
Yellow, D&C. No. 7 ... lb.	21.00	-
No. 8 ... lb.	20.55	-
No. 10 ... lb.	48.80	48.85
No. 11 ... lb.	35.25	-
Dyes, coaltar, for general use in cloth and paper dyeing (by Color Index Name). f.o.b. works		
A Blk 1 Blue black ex conc. ... lb.	5.75	-
Dyes, A Bl 9 Blue 2G ... lb.	5.46	-
A Bl 45 Alizarine Blu SAP 150% . lb.	19.85	-
A Bl 90 Alizarine Br. Cy G ... lb.	14.13	-
A Bl 113 Navy 5R ... lb.	6.55	-
A Gr 16 Gast 2G 333% ... lb.	22.12	-
A Or 7 II ... lb	3.72	-
A Or 8 RO Ex. Conc. ... lb.	4.00	-
A Or 10 Wool Or G ... lb.	4.30	-
A Or 74 Metallized Or GNA ... lb.	6.15	-
AR 2G ... lb.	5.13	-
AR 14 Azo Rubine 133% ... lb.	8.85	-
AR 18 Scarlet 4R Conc. ... lb.	5.45	-
AR 88 Fast Red A. Conc. ... lb.	6.85	-
AR 151 Silk Red 3B Conc. ... lb.	4.50	-
AV 17 5BNS Conc. ... lb.	9.75	-
AV 49 4BNS Conc. ... lb.	12.22	-
AY 17 Fast Light Yell 2G. ... lb.	5.69	-
AY 23 Tartrazine Ex Conc. ... lb.	6.16	-
B Bl 9 Zinc Free ... lb.	16.40	-
B Br 4 Bismark Brown R Ex. Conc. lb.	4.42	-
B G 1 Jade Crystals ... lb.	9.55	-
B Gr 4 Malachite Green Crystal . lb.	6.90	-
BV 1 Methyl Violet Crystals ... lb.	6.80	-
BV 10 Rhodamine B Ex. ... lb.	10.95	-
BY 2 Bond Yell SFA 150% ... lb.	10.10	-
D Bl 1 Sky Blue 6B Conc. ... lb	4.62	-
Ex Conc. 300% ... lb.	9.25	-
D Bl 8 Azurine G Conc. ... lb.	9.45	-
D Bk 22 Fast Black GR ... lb.	2.85	-
Fast Black GR 150% ... lb.	4.28	-
D Br 230 Resin Fast Brown BRNB 200% ... lb.	7.23	-
D Gr 26 Resin Fast Green GL ... lb.	9.15	-
DR 2 4B Ex. Conc. ... lb.	7.98	-
DR 31 Brilliant-Red 12B Conc. . lb.	6.16	-
DR 80 Fast Red 8BLN ... lb.	6.15	-
DR 81 Paper Red 8BLP ... lb.	0.85	-
DR 251 Fast Scarlet AV ... lb.	6.25	-
D Or 102 Fast Orange WSP Liq. . lb.	2.47	-
WS. Conc. 150% ... lb.	11.25	-
D Y 4 Brilliant Paper Yell 3GX 125% ... lb.	4.69	-
Brilliant Paper Yell 3GX Liq. ... lb.	1.75	-
D Y 11 Stilbene Yellow GA. Ex. Conc. ... lb.	3.03	-
D Y 41 Fast Yellow RGL Conc. 200% ... lb.	9.75	-
DY 27 Resin Fast Yellow L5G ... lb.	14.40	-
Ds R 1 Scarlet BA ... lb.	4.26	-
Ds R 91 Pink REL 200% ... lb.	21.00	-
Ds Y 3 Yellow G ... lb.	3.65	-
Ds Y 54 Yellow 3G ... lb.	6.84	-
Ds Or 3 Orange GRA ... lb.	4.91	-
Ds Or 37 Orange OB ... lb.	3.77	-
Ds V 1 4RN Paste ... lb.	7.85	-
Ds V 26 Bordeaux BV 200% ... lb.	17.25	-
Ds Bl 27 Blue BGLF ... lb.	10.05	-
Ds Bl 102 Blue GFDA 300% ... lb.	22.80	-
50% Paste ... lb.	4.10	-
VG 1 Jade Green Double Paste . lb.	5.60	-
V Bk 25 Olive TA Paste ... lb.	5.85	-

E

Endrin, tech., 95-99%, dms., t.l. ... lb.	7.00	-
Ephedrine, syn. anhyd., USP, 80-oz. lots ... oz.	1.25	-
Ephedrine hydrochloride, NF, cryst., less than 1,000 kg. ... kilo	38.26	40.25
Ephedrine sulfate, USP, cryst., dms., less than 1,000 kilos ... kilo	43.00	45.25
Epichlorohydrin, tanks, divd ... lb.	.86	-
Epinephrine base, syn., USP, bots., 100-gram lots ... gram	.60	-
Epoxy resin, liquid, bulk tanks, divd. .. lb.	1.31	1.41
Solid, bgs., t.l. ... lb.	1.28½	1.33½
Epsom salt (see Magnesium sulfate).		
Erythorbic acid, powd., gran., 100 lb. dms., t.l. or mixed t.l. f.o.b. works ... lb.	4.10	4.25
Ester gum, gum-rosin type, dms., c.l., divd., Ill., Md., Ky., E. States, Minneapolis, N.C., Ohio, St. Louis, St. Paul, Va., W. Va. lb.	.75	-
Ester gum, wood-rosin type, dms., c.l., same basis ... lb.	.43	.46
Ethyl acetate, syn., 85-88%, tanks, divd. ... lb.	.41	.41½
99%, tanks, divd ... lb.	.41½	.42½
Ethyl acetoacetate dms., c.l., divd. . lb.	1.13	-
tanks, divd ... lb.	1.05	-
Ethyl acrylate, tanks, frt alld. ... lb.	.66	-
Ethyl alcohol, syn., 190 pf., USP tax free, tanks, divd. E. ... gal.	1.56	-
Ethyl alcohol, absolute, 200 pf., tax free prices 12c. higher than 190 pf., tax free.		
Ethyl alcohol, fermentation, tanks, f.o.b. works ... gal.	1.06	1.28
Price range attributable to various state tax incentives.		
Ethyl alcohol, denat. (see Denatured alcohol, ethyl).		
Ethyl p-aminobenzoate, NF (see Benzocaine).		
Ethyl benzoate, dms ... lb.	1.35	1.50
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E. ... lb.	.76	-
Ethyl butyrate, dms. ... lb.	1.35	1.50
Ethyl cellulose, standard vis., 7 cps. bgs., t.l., frt. equald. E. ... lb.	4.55	-
standard vis., 10, 20, 45, 100 cps., t.l., frt. equald. E. ... lb.	4.17	4.22
medium vis., 50, 70, 100 cps., t.l., frt. equald. E. ... lb.	4.25	-
USP vis., 7 cps bgs., t.l., frt. equald. E ... lb.	4.88	-
USP 10,20,45,100 bgs., t.l., frt. equald. E ... lb.	4.59	4.69
VSP (medium) 50,70,100 bgs., t.l., Frt. equald. E. ... lb.	4.51	-
Ethyl chloride, tech., cyls., frt. alld. . lb.	.26	.28½
tanks, frt. alld ... lb.	.24	.26½
Ethyl cinnamate, dms ... kilo	41.00	-
Ethyl ethanolamines, mixed. dms., t.l., divd. E. ... lb.	1.23	-
tanks, divd. E. ... lb.	1.15	-
Ethyl ether, refined, tanks, f.o.b. ... lb.	.46	-
Ethyl hexanoate, dms. ... lb.	4.25	4.75
2-Ethylhexoic acid, dms., c.l., t.l., divd. E. ... lb.	.63	-
tanks divd. E. ... lb.	.57	-
2-Ethylhexyl acrylate, straight or mixed, tanks, frt. alld. E. .. lb.	.79.5	-
2-Ethylhexyl alcohol, tanks, divd. .. lb.	.35	-
Ethyl iodide, cbys., works ... lb.	6.25	-
Ethyl linalool, syn. 55-gal. dms. . lb	10.60	-
Ethyl linalyl acetate, syn., 55-gal. dms. ... lb.	10.85	-
Ethyl methacrylate, tanks, frt. equald ... lb.	1.06	-
n-Ethyl morpholine, dms, t.l., frt. alld ... lb	2.00-	
tanks, same basis ... lb	1.92	-
n-Ethyl-a-naphthylamine, dms., works ... lb.	1.04	-
Ethyl oxalate (see Diethyl oxalate).		
Ethyl parathion (see Parathion, ethyl)		
Ethyl silicate dist. (see Tetraethyl orthosilicate).		
Ethyl silicate, 40% available SiO_2, dms., t.l., f.o.b. works ... lb.	1.45	1.46
tanks, f.o.b. works ... lb.	1.39	-
N-Ethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. ... lb.	3.18	-
tanks, same basis ... lb.	3.10	-
N-Ethyl-o-toluidine, dms ... lb.	2.85	2.90
Ethyl vanillin 100 lb. dms., 500 lbs. or more ... lb	13.50	-
25 lb. dms., 500 lbs. or more ... lb.	13.75	-
100 lb. dms., less than 500 lbs. .. lb.	14.00	14.50
Ethylamine (see Mono-Di- and Tri-)		
N-Ethylaniline, dms., c.l., t.l., f.o.b. works ... lb.	1.66	-
tanks, same basis ... lb.	1.58	-
Ethylbenzene, bulk, f.o.b. Houston, Tex. ... lb.	.22	.23
Ethylene, contract, divd. ... lb.	.18	.18½
Ethylene brassylate, dms ... lb.	16.00	18.25
Ethylenediamine, 99%, tanks, f.o.b. works ... lb.	1.30	1.305
Ethylenediamine dihydriodide ... lb.	7.55	9.25
Ethylenediamine tetraacetic acid, tetrasodium salt, soln., t.c., t.t., frt. equald ... lb.	.36½	-
Ethylene dibromide dms., c.l., frt., equald ... lb.	.38	.46
tanks, frt. equald ... lb.	.32	.42
Ethylene dichloride, tanks, f.o.b. works ... lb.	.17	.17¼
Ethylene glycol, indust., tanks, frt. alld ... lb.	.31	-
Ethylene glycol, monobutyl ether, tanks, divd. E. ... lb.	.41½	-
Ethylene glycol monoethyl ether, tanks, divd. E ... lb.	.51	-
Ethylene glycol monomethyl ether, tanks, divd. E ... lb.	.34	-
Ethylene glycol monobutyl ether acetate, tanks, frt. alld. E. ... lb.	.64½	-
Ethylene glycol monoethyl ether acetate, tanks, ft. alld., E. ... lb.	.55½	-
Ethylene glycol monomethyl ether acetate, tanks, frt. alld. E. ... lb.	.43	-
Ethylene oxide, tanks f.o.b. ... lb.	.35	.45
Ethylene trichloride (see Trichloroethylene).		
Eucalyptol, NF, dms. Portuguese . kilo.	7.50	-
Eucalyptus citriadora, Chinese ... kilo	3.35	-
Eugenol, USP, dms. ... kilo	7.55	-

F

Fennel oil, sweet, USP, cns. ... lb.	9.00	-
Fennel seed, Egypt ... lb.	.59	.68
Indian ... lb.	.87	.95
Fenugreek seed, Indian, bgs. ... lb.	.25	.32
Ferric chloride anhyd., tech., 350-lb. dms., c.l., works ... 100 lbs.	36.00	-
Ferric chloride, 42 Be. photo grade dms., c.l., works ... 100 lbs.	9.10	-
Ferric chloride, sewage grade, 100 percent basis, f.o.b. works, tank works ... ton	176.00	255.00
Ferric nitrate, cryst., dms., t.l., f.o.b. lb.	.64	-
Ferric oxalate, tech., gran., 50-lb. dm., f.o.b. works ... lb.	1.65	-
Ferric oxides (see Iron Oxides).		
Ferric phosphate, FCC insoluble powder, dms, 10,000 lbs. ... lb.	1.10	1.16
Ferric pyrophosphate, soluble, purif., pearls, 50-lb. dm ... lb.	1.11	-
Ferric resinate, precip., 6.75% Fe. dms., ton lots frt. alld. ... lb.	.45	-
Ferric sulfate, partly hydrated, 100-lb. bgs., c.l., works ... ton	141.00	-
bulk, works ... ton	117.00	-
Ferric ammonium citrate, NF, brown, green gran. 100 lb. dms., 2,000 lb. min., f.o.b. shipping pt. ... lb.	2.00	2.95
2c. per pound surcharge for shipments W. of Denver		
Ferric-ammonium oxalate, fine gran., 250-lb. dms., t.l., f.o.b. works. E. ... lb.	.42	-
Ferric hydroxyethylene diaminetriacetic acid, industrial grade, sodium salt, soln., 4.5% Fe, t.c., t.t., f.o.b. works ... lb.	.55	-
agricultural grade, sodium salt solution, 5% Fe, t.c., t.t., f.o.b. works ... lb.	.64	-
Ferrous fluoborate liq. conc., dms., t.l., works, frt. equald. ... lb	.64	-
Ferrous gluconate, NF, t.l., works E. lb.	2.25	-
Ferrous naphthenate, liq., 6%, Fe. dms., divd ... lb.	1.17	-
Ferrous sulfate, moist, bulk, t.l. f.o.b. works ... ton	30.00	-
heptahydrate, gran., bulk, t.l., f.o.b. works ... ton	145.00	150.00
monohydrate, gran., bulk, t.l., f.o.b. works ... ton	170.00	180.00
USP, powd., 400-lb. dms ... lb.	.49	-
cryst., 250-lb. dms ... lb.	.61	-
Fir oil, Canada dms ... lb.	10.00	-
Siberia, dms ... lb.	12.75	-
Fish oil, refd., alkali, tanks, c.l. ... lb.	.29	-
kettle-bodied, tanks ... lb.	.32	.36
light, cold-pressed, dms., c.l. ... lb.	.34	-
tanks ... lb.	.26	-
Fishmeal, dom., menhaden, 60% protein grd., bulk, f.o.b. Atlantic port ... ton	295.00	-
f.o.b. Gulf port ... ton	290.00	-
Imp., Chilean, 65% protein min., bulk, c.l., t.l., ex whse., f.o.b Atlantic and Gulf ports ... ton.	285.00	-
Fluoboric acid, dms, t.l., works, frt equald ... lb	.70	-
Fluorocarbon, No. 11 bulk, tanks, delvd ... lb	.57	.64
No. 12, bulk, same basis ... lb	.68	.74
No. 22, bulk, same basis ... lb	1.05	1.14
No. 113, bulk, same basis ... lb.	.89	.93½
No 114, bulk, same basis ... lb	1.02	1.08
Fluosilicic acid (see Hydrofluosilicic acid)		
Formaldehyde, 37% methanol free (uninhibited) divd., gulf ... lb.	.088	.0905
44-45% (1% methanol) tanks, divd ... lb	.1015	.1065
37% (inhibited 7% methanol, divd ... lb.	.0945	.1025
37% (inhibited 11-15% methanol) tanks, divd ... lb.	.1055	.1060
Formamide, tanks, f.o.b ... lb.	.39	-
dms., same basis ... lb.	.44	-
Formic acid 90% tanks, f.o.b. works ... lb.	.36½	-
85% dms., c.l., works ... lb.	.51½	-
Fructose, cryst, 18,000 kilos or more, dms ... lb.	.90	1.03
Fumaric acid, food grade, bgs. t.l., frt equald. E. ... lb.	.75½	.77½
tech. grade, bgs., t.l., f.o.b. frt equald ... lb.		.62½
Furfural, tanks, f.o.b. Cedar Rapids, Iowa, and Belle Glade, Fla. lb.	.75	-
Furfuryl alcohol, tanks, f.o.b. Memphis, Tenn. and Omaha, Neb. ... lb.	.72	-

G

G salt, dms., frt. alld. 100% basis .. lb.	2.30	-
Gallic acid, 400-kilo lots ... kilo	23.05	-
Garlic oil, dms., Egyptian ... kilo	100.00	110.00
Gelatin, edible, 100 AOAC test, dms., l.t.l., divd ... lb.	1.50	1.75
125 AOAC test, dms., l.t.l. ... lb.	1.75	1.85
150 AOAC test, dms., l.t.l. ... lb.	1.85	1.95
175 AOAC test, dms., l.t.l. ... lb.	1.95	2.05
200 AOAC test, dms., l.t.l. ... lb.	2.05	2.15
225 AOAC test, dms., l.t.l. ... lb.	2.10	2.25
250 AOAC test, dms., l.t.l. ... lb.	2.20	2.35
275 AOAC test, dms., l.t.l. ... lb.	2.30	2.45
300 AOAC test, dms., l.t.l. ... lb.	2.50	2.65
Gentian violet (see Methyl rosaniline chloride).		
Geraniol, syn., 80-82%, dms. ... lb.	5.25	-
nat., 90-92%, dms ... lb.	3.50	-
syn, 96-98%, dms ... lb.	5.75	-
Geranium oil, Moroccan ... lb.	46.00	-
Bourbon ... lb.	65.00	-
Chinese ... lb.	23.00	-
Egypt ... lb.	22.75	-
Turkish (see Palmarosa oil).		
Geranyl acetate, dms ... lb.	5.44	6.00
nat., dms ... lb.	10.95	-
Geranyl formate, syn., dms ... lb.	8.60	-
nat., dms ... lb.	15.95	-
Gilsonite, g.p., bulk, c.l., f.o.b. Bonanza, Utah ... ton	180.00	-
selects, same basis ... ton	180.00	-
Ginger, Cochin, bgs ... lb.	.63	.65
Chinese ... lb.	.56	.58
Ginger oil, Chinese ... kilo	35.00	44.00
Indian ... kilo	65.00	-
Ginger oleoresin, NF, bots. ... lb.	30.00	-
Glauber's salt (see Sodium sulfate).		
Gluconic acid tech. 50% dms., c.l., t.l., f.o.b. works ... lb.	.50	-
tanks, same basis ... lb.	.44	-

CHEMICAL PRICES

WEEK ENDING DEC. 12, 1986

Glue, bone, extracted, green, jelly-grams, bgs., c.l ... lb.	-	-
85 jellygrams, bgs., c.l., f.o.b. .. lb.	.86	-
115 jellygrams, bgs., c.l., f.o.b. .. lb.	.78	-
135 jellygrams, bgs., c.l., f.o.b. .. lb	.77	-
164 jellygrams, bgs., c.l., f.o.b. .. lb.	.79	-
192 jellygrams, bgs., c.l., f.o.b. .. lb.	.87	-
220 jellygrams, bgs. c.l. f.o.b. ... lb.	.93	-
Glue, hide,		
108 jellygrams, bgs., t.l., f.o.b. ... lb.	.80	-
135 jellygrams, bgs., t.l., f.o.b. ... lb.	.85	-
164 jellygrams, bgs., t.l., f.o.b. ... lb.	.90	-
192 jellygrams, bgs., t.l., f.o.b. ... lb.	.95	-
222 jellygrams, bgs., t.l., f.o.b. ... lb.	1.00	-
251 jellygrams, bgs., t.l., f.o.b. ... lb.	1.05	-
283 jellygrams, bgs., t.l., f.o.b. ... lb.	1.10	-
315 jellygrams, bgs., t.l., f.o.b. ... lb.	1.15	-
347 jellygrams, bgs., t.l., f.o.b. ... lb.	1.20	-
379 jellygrams, bgs., t.l., f.o.b. ... lb.	1.25	-
411 jellygrams, bgs., t.l., f.o.b. ... lb.	1.30	-
444 jellygrams, bgs., t.l., f.o.b. ... lb.	1.35	-
477 jellygrams, bgs., t.l., f.o.b. ... lb	1.40	-
Glutamic acid, 99½% dms., 100-lb. lots, frt alld ... kilo	6.65	-
Glycerine, nat., refd, USP, CP 99½% tanks, divd. ... lb	.89½	-
USP, CP, nat 96%, tanks, divd. . lb	.87¼	-
Syn. 96%, tanks divd ... lb	.89¼	-
Syn. 99.5%, tanks divd ... lb	.91	-
Glycine (see Aminoacetic acid)		
Glyceryl guaiacolate 100-lb. fib. dms f.o.b ... kilo	14.50	-
Glycolic acid (see Hydroxyacetic acid)		
Glyoxal 40% soln., bulk, tanks, divd ... lb	.44½	-
Grapefruit oil, Fla., dms ... lb.	3.00	-
Calif., dms ... lb	3.00	-
Israeli ... lb	3.00	-
Graphite, amorph, powd., bgs., dms., ex whse ... lb	16	40
cryst., 88-90%, powd., bgs., dms., ex whse. ... lb.	30	60
Graphite, cryst., 90-92%, powd., bgs., dms., ex whse ... lb	40	75
95-96% powd., bgs., dms., ex whse ... lb	60	90
Graphite, amorph., cryst. 97% and up, powd., bgs., dms., ex whse ... lb	80	1 20
Graphite, flake, No. 1, 90-95%, bgs dms ex whse ... lb	65	75
No. 2, 90-95%, bgs., dms., ex whse ... lb	65	75
Grease (See Oils, Fats & Waxes market report)		
Grease oil (See Lard oil).		
Guaiacol, tech., 500-lb dms., 24,000 lb min., f.o.b. Wallingford, Conn ... lb	2.70	-
Guaiacwood oil, dms ... lb	3.75	-
Guar gum, edible, bgs., c.l., f.o.b. ship't pt ... lb	50	75
Indust., bgs., high viscosity, c.l., same basis ... lb	50	85

H

Heliotropin, dms ... lb.	8.00	8.25
Hemlock oil (see Spruce oil).		
Henbane leaves, bls ... lb.	.55	-
Heptane, indust., tanks, f.o.b. Beaumont, Tex ... gal.	1.07	-
95%, tanks, f.o.b. Houston, Tex ... gal.	1.18	-
Heptanoic acid, syn., tanks, f.o.b ...	.65	-
1-Hexadecanol, syn., tanks, f.o.b. ... lb.	.43½	-
Hexahydrophthalic anhydride, tech. dms., l.t.l., f.o.b. works ... lb.	1.42	-
Hexamethylenetetramine, gran. bgs., c.l., t.l., works ... lb.	.55	-
gran. dms., c.l., t.l., works .. lb.	.59	-
pdr. bgs., c.l., t.l., works ... lb.	.60	-
powd. dms, c.l., t.l., works .. lb.	.63	-
Hexane, indust., tanks, works ... gal.	1.01	1.15
95%, tanks, f.o.b. Houston, Tex ... gal.	1.12	-
1-Hexanol, syn, tanks, f.o.b ... lb.	.50	-
Hexyl alcohol, mixed isomers, tanks ... lb.	.32	-
p-Hexyl methacrylate, dms., c.l., works ... lb.	.75½	-
Hexylene glycol, tanks, divd ... lb.	.50	-
Hexylresorcinol, USP, dms., 25-lb. lots or more, frt. alld ... lb.	30.00	-
Homatropine hydrobromide, USP, 10-100-oz. lots, bots ... oz.	10.25	11.30
Homatropine methylbromide, USP, 10-250 oz. lots, bots ... oz.	9.70	10.70
Horehound herb, bls ... lb.	.25	.28
Hydrazine hydrate, 85%, t.l., frt. alld ... lb.	1.54	-
55-gal. dms., t.l., frt. alld ... lb.	1.61	-
Hydriodic acid, purif., 47%-57%, 2-cbys., f.o.b. works ... lb.	7.60	-
Hydroabietyl alcohol, tech., solid, dms., c.l., f.o.b. zone 1 ... lb.	.65	-
tanks, f.o.b. zone 1 ... lb.	.60	-
Hydrobromic acid, 48% dms., c.l, t.l., f.o.b. ... lb.	.38½	-
Hydrochloric acid, anhyd. (see Hydrogen chloride).		

CHEMICAL PRICES

WEEK ENDING DEC. 12, 1986

Hydrochloric acid, 20° Be, tanks, works, East ... ton	55.00	65.00
Midwest ... ton	60.00	70.00
Gulf Coast ... ton	57.00	-
West Coast ... ton	90.00	105.00
22° acid, same basis, East ... ton	68.00	76.00
Midwest ... ton	66.00	70.00
Gulf Coast ... ton	63.50	-
West Coast ... ton	100.00	115.00
NOTE: Prices vary and are either freight collect freight equalized depending on producer and location.		
Hydrocortisone acetate, micronized, dms., 25 kilos or more . gram	.70	-
Hydrocortisone, alcohol, micronized, dms., 25 kilos or more . gram	.70	-
Hydrofluoric acid, anhyd. (see Hydrogen fluoride)		
Hydrofluoric acid, aqueous. 70% tanks., f.o.b. frt. equald ... 100lbs.	43.00	
Hydrofluosilicic acid, 15-gal. dms., t.l., works, 30% basis ... ton	-	-
tanks, 100% basis, works ... ton	190.00	210.00
Hydrogen bromide, anhyd. cyls., extra, 30,000-lbs., f.o.b. works ... lb.	7.00	-
Hydrogen chloride, anhyd., 50-lb. cyls., c.l., works ... lb.	.65	-
600-lb. cyls., c.l., same basis ... lb.	.62	-
Hydrogen chloride, anhyd., tube trailers, seller's trailer, min. 100,000lbs. a year ... lb.	.37	-
tube trailers, buyer's trailer ... lb.	.27	-
Hydrogen chloride anhyd., tanks, works ... ton	270.00	-
Hydrogen cyanide, liq., 99.5%, tanks, works ... lb.	.60	-
Hydrogen fluoride, anhyd., tank cars c.l., f.o.b., frt. equald ... lb.	.6875	-
Hydrogen peroxide, 35% tech., tanks, works, ft. equald ... lb.	.2325	-
50% tankcars, frt. equald ... lb.	.3225	-
70%, tankcars frt. equald ... lb.	.45	-
Hydrogen sulfide, liq.. 99.25% min. seller's tanks, works ... lb.	.12	.13
170 lb. cylinders ... lb.	2.27	-
Hydroquinone, photo grade, consumers. c.l., t.l., divd. ... lb.	2.64	-
tech., dms. c.l., divd. ... lb.	1.95	-
Hydroxyacetic acid, tech., 70%, tanks, Belle, W. Va. ... lb.	.49½	-
Hydroxylammonium sulfate, dms., t.l., f.o.b. ... lb.	.83	-
p-Hydroxybenzene sulfonic acid (see p-Phenolsulfonic acid).		
Hydroxybutyl methylcellulose (visc. 12,000 cps.) 50 lb. bags, t.l., cl. 30,000 lb. min., divd., zone 1. ... lb.	2.10	-
Hydroxycitronellal dimethyl acetal, dms ... lb.	16.55	-
p-Hydroxydiphenylamine, dms., t.l., f.o.b. works ... lb.	4.10	-
Hydroxycitronellal, natural, dms. ... lb.	9.40	-
pure, dms. ... lb.	13.60	-
extra grade, dms. ... lb.	14.80	-
syn., dms. ... lb.	9.50	-
Hydroxyethylcellulose, t.l., divd ... lb.	2.07	2.12
Hydroxyethyl methylcellulose (visc. 5,000 through 45,000 cps.) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.73	-
Hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.87	-
Hydroxypropyl methylcellulose, U.S.P (visc. 50 through 100 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.99	-
Hydroxypropyl methylcellulose (visc. 4,000 through 15,000 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.17	-
Hydroxypropyl methylcellulose (visc. 50 through 100 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.64	-
8-Hydroxyquinoline (see Oxyquinoline)		
Hypophosphorous acid, purif., 50% dms., c.l., works ... lb.	3.15	-

I

Ichthammol, NF, 200-kilo dms ... lb.	4.25	4.50
Iminodiacetic acid, 96% min., dms., c.l., t.l., works ... lb.	3.00	-
Indole, dms ... lb.	25.50	-
Inositol, 50-kilo dms., 1000 kilos or more, f.o.b. works ... kilo	17.50	22.00
Iodine, crude, dms ... kilo	13.50	18.00
Iodine USP ... lb.	14.21	14.59
Iodochlorhydroxyquin, USP, XVI 50-kilo dms., 100-499 kilos, frt. alld ... kilo	35.00	45.00
Iodoform, NF, dms., 300-lbs., f.o.b. works ... lb.	24.00	-
a-Ionone, dms. ... lb.	18.20	-
b-Ionone, dms. ... lb.	13.10	-
Ipecac root, whole, bgs ... lb.	25.00	-
Irish moss, bleached, prime, whole ... lbs.	.55	.60
Iron blue, alkali-resistant, bgs., l.c.l., ton lots, div. E. ... lb.	2.70	-
Iron blue, reg., bgs., l.c.l., ton lots, same basis ... lb.	2.00	2.15
Iron, purif., powd., pails, 10-100-lb. lots ... lb.	1.00	-
Iron oxide, black, syn., bgs., c.l., frt. equald ... lb.	.68½	.75½
Iron oxide, brown, syn., bgs., c.l., frt. equald ... lb.	.68	.78½
Iron oxide, metallic brown, l.c.l., bgs., frt. equald ... lb.	.13	.15
Iron oxide, nat., red., dom., pure, bgs., c.l., works ... lb.	.275	.40
Iron oxide, yellow, ... lb.	.18	-
syn., bgs., c.l., frt. equald. ... lb.	.63	.71
Iron oxide, buff, nat., dom, bgs., c.l., t.l., works, light ... lb.	.75	.80
dark ... lb.	.60	-
other shades, bgs., c.l., frt. equald ... lb.	.50	.55
Isatoic anhydride, bgs., f.o.b. works ... lb.	1.40	-
Isoamyl alcohol, 95% tanks, frt. alld ... lb.	1.44	1.48
Isoborneol, 100 lb. dms. ... lb.	7.25	-
Isobornyl acetate, dms ... lb.	.80	1.16
Isobutyl acetate, solvent grade, tanks, frt. alld ... lb.	.45	.48
Isobutyl acrylate, tanks, frt. alld E. ... lb.	.71	-
Isobutyl alcohol, tanks, divd ... lb.	.29	-
Isobutylene, 99%, tanks, f.o.b. works ... lb.	.32	-
Isobutyl isobutyrate, tanks, f.o.b. works ... lb.	.42½	-
Isobutyl methacrylate, tanks, divd. ... lb.	.87	-
Isobutyl phenylacetate, dms. ... lb.	3.10	3.50
Isobutyl salicylate, dms ... lb.	3.45	-
Isobutyraldehyde, tech., dms., c.l., divd ... lb.	.43	-
tanks, divd ... lb.	.35	-
Isobutyric acid, dms., c.l., t.l., divd. ... lb.	No Prices	
tanks, same basis ... lb.	.75	
Isobutyronitrile, dms., c.l., f.o.b. works frt. collect ... lb.	.84	-
tanks, same basis ... lb.	.75	-
Isoeugenol, dms ... lb.	5.20	5.60
Isoniazid, powd. ... kilo	12.00	-
Isonicotinic acid, hydrazine (see Isoniazid).		
Isononyl alcohol, dms., t.l. ... lb.	.48	-
Iso-octyl alcohol, tanks, divd ... lb.	.44	-
Isophorone, tanks divd ... lb.	.81	-
Isophthalic acid, 99%, bulk, f.o.b., Joliet, Ill., min. frt. alld ... lb.	.46	-
Isophthalonitrile, bgs., t.l., works ... lb.	2.65	-
Isopropyl acetate, tanks, divd ... lb.	.47	-
Isopropyl alcohol, anhyd., 99%, tanks, divd ... gal.	1.38	-
refd., 95%, tanks, divd ... gal.	1.31	-
refd., 91%, tanks, divd ... gal.	1.25	-
Isopropyl ether, tanks, divd ... lb.	.44	-
crude, tanks, divd ... lb.	.37	-
Isopropylamine. (see Mono-, Di- or Tri-).		
Isopropyl myristate, dms., t.l., E. ... lb.	1.19	1.50
Itaconic acid, refd, bgs t.l. ... lb.	1.45	1.48

J

J acid, paste, dms., works, 100% basis ... kilo	4.75	-
Japan wax, cs. ... lb.	5.50	5.80
Jojoba oil, 55-gal. dms., f.o.b. Arizona producing point ... gal.	30.00	40.00
Juniperberry oil, Italian ... kilo	115.00	-

K

Kaolin, water washed, fully calcined, bags c.l., f.o.b. Georgia ... ton	255.00	-
NF pwd., colloidal, bacteria controlled, 50 lb. bags., 5,000 lb. lots ... lb.	.24	-
Kaolin, uncalcined. No. 1 coating, bulk, c.l., f.o.b., Georgia ... ton	94.00	-
No. 2 coating ... ton	75.00	-
No. 3 coating ... ton	73.00	-
No. 4 coating ... ton	70.00	-
filler, gen.l purpose, same basis ... ton	58.00	-
delaminated water washed, uncalcined paint grade 1 micron avg., same basis ... ton	182.00	-
dry-grd. airfloated soft, same basis ... ton	60.00	-
Karaya gum, No. 1, powd., bbls ... lb.	2.25	-
No. 2, powd., bbls ... lb.	1.95	-
Kola nuts, bgs ... lb.	.52	.57

L

Lacquer diluent petroleum, 140F.-200F. b.r., t.c., New Jersey and New York ... gal.	1.25	-
Houston, Texas ... gal.	1.29	-
Lacquer diluent, petroleum 200F.-240F. b.r., tankcars, New York and New Jersey ... gal.	1.20	1.25
Houston, Tex. ... gal.	1.12	-
Lactic acid, food grade 88%, t.c., f.o.b. works ... lb.	1.06	-
50%, t.c., frt. equald ... lb.	.62	-
tech., 88%, t.c., frt. equald ... lb.	1.03	-
Lactose, edible, reg. bgs., c.l., works ... lb.	.22	.28
Lactose, USP, reg. dms., c.l., t.l., frt. equald ... lb.	.55	.69
Lactose, USP, spray dried, bgs., t.l., frt. equald ... lb.	.60	-
Lake C, red toner. (red 53) bbls., frt. alld ... lb.	5.70	-
Lanolin, anhyd., cosmetic. 400-lb. dms., works ... lb.	1.18	1.25
pharmaceutical, 400-lb. dms. works ... lb.	1.15	-
tech., (under 2% f.f.a.). 400-lb. dms., works ... lb.	1.08	113
Lard (See Oils, Fats & Waxes market report.)		
Lard oil, No. 1, dms., c.l., f.o.b. ... lb.	.34	-
tanks, same basis ... lb.	.28	-
Lard oil, extra, winter-strained, dms., c.l. ... lb.	.41	-
tanks, same basis ... lb.	.33	-
prime, burning, dms., c.l., same basis, Chicago ... lb.	.43	-
prime, burning, tanks, same basis ... lb.	.35	-
NOTE: 300 Mi. rad. 1¼c. higher, except Texas, 2c., and West Coast, 3c. higher.		
Laurel leaves, Turkish ... lb.	3.00	3.25
Laurent's acid, drums, f.o.b. ... lb.	3.85	-
Lauric acid, coml., pure bgs., c.l. ... lb.	.65	.71
Lauric aldehyde (aldehyde C-12). dms. ... lb.	7.75	-
n-Lauryl methacrylate, dms., c.l., t.l., works ... lb.	1.72	-
Lavandin oil, Abrialis, 30-32%, dms. ... lb.	6.50	-
Lavender flowers, ord. ... lb.	.65	.75
medium, bls. ... lb.	.80	.90
select. bls. ... lb.	1.10	1.19
Lavender flower oil, NF, French, 40-42%, ester, cns. ... lb.	9.00	13.00
spike, Spanish, dms ... kilo	13.00	14.00
Lead acetate, purif., flake. 400-lb. dms., works ... lb.	.46	-
tech., flake, t.l., 400lb. dms. works ... lb.	.37	-
Lead blue, basic, sulfate, bbls., c.l., ship.t. pt., f.o.b. ... lb.	.87	-
Lead carbonate. (see Lead white basic carbonate).		
Lead chloride, 400-lb. dms., works. ... lb	3.25	-
Lead dioxide, tech., powd., 200-lb. dms., t.l., works ... lb.	.66	.70
Lead fluoborate, liq. conc., dms., t.l., works, frt. equald ... lb.	.65	-
Lead metal, divd ... lb.	.28	-
Lead monosilicate, milled, bgs., c.l., f.o.b. works ... lb.	.36½	-
coarse, bgs., c.l., same basis ... lb.	.37½	-
Lead naphthenate liq., 24% Pb. dms., frt. alld ... lb.	1.11	-
Lead nitrate tech., cryst., 400-lb. dms., t.l., works ... lb.	.32½	-
Lead peroxide (see Lead dioxide).		
Lead red, 95% Pb_3O_4, or less, bgs. c.l., works ... lb.	.38	.38½
Lead red, 97% Pb_3O_4, bgs. c.l., works ... lb.	.38½	.39
Lead, red, 98% Pb_3O_4, bgs., c.l., same basis ... lb.	.39½	-
Lead silicate (see Lead, white, basic silicate).		
Lead silicochromate, bgs., c.l., works ... lb.	.35	-
Lead sulfate (see Lead, blue, basic sulfate and Lead, white, basic sulfate)		
Lead, white, basic carbonate, bgs., c.l., frt. alld ... lb.	1.30	1.40
Lead, white, basic, silicate, bgs., c.l., same basis ... lb.	.87	-
Lead, white, basic sulfate, bgs., c.l., same basis ... lb.	.85	-
Lecithin, edible, tech., bleached, non-ret. dms., l.c.l., works ... lb.	.36	-
unbleached non-ret. dms., l.c.l., same basis ... lb.	.34	-
edible, tech. bleached, non-ret., dms., t.l., works ... lb.	.28	-
unbleached, non-ret., dms., t.l., same basis ... lb.	.26	-
Lemon oil, Argentina ... kilo	15.00	-
Brazil ... lb.	9.00	-
Calif., USP, dms. ... lb.	8.50	9.50
Italian ... lb.	12.60	-
Lemongrass oil, Indian, dms ... kilo	11.25	-
Guatemalan, dms ... lb.	2.25	-
dl-Leucine, dms., 1 kilo works ... kilo	60.00	90.00
Licorice root, whole, bls ... lb.	.40	.50
gran., bls ... lb.	.70	.90
powd., bls ... lb.	.95	-
Lignosulfonate (see under Ammonium or Sodium lignin sulfonate).		
Lime, chemical, pebble (quicklime), bulk, 50,000 lbs., works, f.o.b. plants ... ton	39.00	45.00
Lime, chemical, hydrated, bulk, same basis ... ton	46.00	50.00
bgs., same basis ... ton	54.00	57.00
Lime, NF, purif., 100-lb. dms. ... lb.	.69	-
Lime oil, dist., Mexican, dms. ... lb.	5.60	-
Haitian, dist., dms ... lb.	6.50	-
expressed, dms. ... lb.	17.50	-
Lime salts (see Calcium).		
d-Limonene, dms. ... kilo	.70	.85
Linalool ex bois de rose oil, dms. ... lb.	6.35	-
syn., 98-100% dms., f.o.b. works. ... lb.	2.93	-
Linalool oxide, syn., 55-gal. dm. ... lb.	7.75	-
Linalyl acetate ex bois de rose oil, 90-92%, dms ... lb.	18.00	21.00
syn. 98-100%, dms., f.o.b. works. ... lb.	3.10	-
Linalyl benzoate, syn., 55-gal. dms. ... lb.	8.00	-
Linalyl cinnamate, syn., 55-gal. dms. ... lb.	59.85	-
Linalyl formate, syn., 55-gal. dms. ... lb.	7.75	8.50
Linalyl isobutyrate, syn., 55-gal. dms. ... lb.	6.50	6.55
Lindane, 20% formulation, dms., divd ... gal	13.10	-
99.9% tech., dms., t.l., divd ... lb.	6.50	-
Linalyl propionate, syn., 55-gal. dms. ... lb.	7.90	-
Linden flowers, with leaves, bls. ... lb.	.78	.85
without leaves, bls. ... lb.	.90	1.15
Linseed meal (see Oils, Fats & Waxes market report).		
Linseed oil, (see Oils, Fats & Waxes market report)		
Linseed oil fatty acid, dist., dms. ... lb.	.60	.67
tanks ... lb.	.53	.62
Litharge, com.l., powd., bgs., c.l., works ... lb.	.34½	.40
Lithium bromide, anhyd., dms., ton lots, divd ... lb.	6.27	-
soln., same basis ... lb.	4.00	4.12
Lithium carbonate, powd., bgs., c.l., t.l., divd ... lb.	1.60	-
Lithium chloride, anhyd., c.l., t.l., divd ... lb.	3.32	3.49
soln., dms., c.l., t.l., divd ... lb.	2.94	2.96
Lithium fluoride, dms., c.l., t.l., divd. ... lb.	4.90	5.12
Lithium hydride, c.l., t.l., divd. 10,000 or more ... lb.	23.60	-
Lithium hydroxide, monohydrate, dms., c.l., t.l., divd ... lb.	1.93	-
Lithium hypochlorite, c.l., t.l., works ... lb.	1.07	-
Lithium metal, 1,000-lb. lots or more, divd ... lb.	22.70	-
Lithium nitrate, tech., dms., 100-lb. lots ... lb.	3.25	-
Lithium stearate, bgs., c.l., frt. alld. ... lb.	1.01	-
Lithium sulfate, anhydrous, t.l. divd ... lb.	3.09	-
Lithol red toner, barium, dms., frt. alld ... lb.	3.27	-
calcium, dms., same basis ... lb.	3.50	-
Lithol rubine toner (red 57), resinated, dms., frt. alld ... lb.	5.60	-
Litsea cubeba oil, dms ... lb.	2.75	-
Locust bean gum, powd, bgs. ... lb.	6.00	6.75
2,4-Lutidine, dms., t.l., frt. equald. ... kilo	5.75	-
Lycopodium, 50-lb. dms ... lb.	8.00	10.00
1-Lysine monohydrochloride, feed grade, 10,000 lbs. divd ... lb.	1.35	1.40

M

Mace, East Indian, siftings ... lb.	5.40	-
Siauw #2 ... lb.	5.80	-
Magnesia, tech., light, neoprene-grade, bgs., c.l., t.l., works ... lb.	.76	.81
Magnesia, syn., tech., chemical-grade, bulk, c.l., t.l. works ... ton	330.00	-
bags, c.l., t.l., same basis ... ton	365.00	-
deadburned, bulk, same basis ... ton	392.00	-
bgs., same basis ... ton	409.00	-
Magnesia, nat., tech., heavy, 85%, 150 mesh, bulk, c.l., t.l., f.o.b. Nev. ... ton	232.00	-
90%, 325 mesh, same basis ... ton	265.00	-
Magnesium bromide, 80-lb. dms., hexahydrate ... lb.	2.50	-
Magnesium carbonate, light, tech., bgs., c.l., t.l., works, frt. equald ... lb.	.73	.78
USP, lite bgs., c.l., same basis ... lb.	.74	.80
USP, heavy, bgs., c.l., same basis ... lb.	.83	-
Magnesium chloride, anhyd., 92%, flake or pebble dms, c.l, works ... lb.	.12¾	.15
Magnesium chloride, hydrous, 99%, flake, bgs., c.l., works ... lb.	.14½	-
Magnesium gluconate, 100-lb. dms f.o.b. works, E. ... lb.	4.25	-
Magnesium hydroxide, NF, powd., dms., c.l., t.l., works frt. equald ... lb.	.78	-
Magnesium lauryl sulfate, tanks, f.o.b. works ... lb.	.22	.26½
Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more, f.o.b. Freeport, Tex. ... lb.	1.53	-
die casting alloys ... lb.	1.29	1.33
Magnesium nitrate, tech., flake, 250-lb. dms., t.l., works ... lb.	.32	-
Magnesium oxide, USP, light, bgs., c.l., works, frt. equald ... lb.	1.65	-
heavy, dms., c.l., same basis ... lb.	1.54	-
Magnesium oxide, tech. (see Magnesia).		
Magnesium phosphate, tribasic, tech. 60-lb. bgs., f.o.b. ... lb.	1.00	-
Magnesium silicate (see Talc).		
Magnesium silicofluoride, bgs., c.l., t.l. works ... lb.	.1645	.1800
Magnesium stearate, bulk, t.l. ... lb.	.95	1.05
Magnesium sulfate 10% Mg. (epsom salts), tech. bgs., t.l., works ... lb.	.14	-
bulk, same basis ... lb.	.13	-
USP, cryst., bgs., same basis ... lb.	.13½	-
USP, cryst., bulk, same basis ... lb.	.14½	-
Magnesium sulfate, 17% Mg. (synthetic monohydrate), tech. bgs. t.l., works ... lbs.	.80	-
CP, same basis ... lbs.	1.25	-
Magnesium sulfate, anhydrous, CP bgs., t.l., works ... lbs.	1.75	-
Magnesium sulfate trihydrate, tech., bgs., t.l., works ... lb.	.45	-
Magnesium trisilicate, USP, powd., fib. dms. 5,000-lb. lots ... lb.	.38	-
USP, micronized powd., dms., 375-lb. lots ... lb.	.63	-
Malathion, tech., dms., t.l., works. ... lb.	1.62	-
Maleic acid, cryst., powd., drums, 100 kilos, f.o.b. ... kilos	3.20	-
drums, tons, f.o.b. ... kilos	2.80	-
Maleic anhydride, bgs., t.l., works, frt. equald ... lb.	.55	.59
tanks, works, frt. equald ... lb.	.53	-
Malic acid, purif. and food grades. 50-lb. bgs., t.l., c.l., divd ... lb.	.61	.64
Mandarin oil, Brazilian, dms ... lb.	17.75	-
Mandelic acid, dms., 1,000 kilo lots ... kilo	8.00	10.00
Manganese acetate, dihydrate, dms. ... lb.	.43½	.46
divd ... lb.	.48	-
tetrahydrate, dms., t.l., divd ... lb.	1.68	1.80
Manganese borate printing ink drier ... lb.	.80	.99
Manganese borate, tech., dms. ... lb.		
Manganese carbonate, chemical grade, 46% Mn. bgs., 20,000-lb. lots or more, works ... lb.	1.05	-
Manganese chloride, anhyd., dms., 20,000-lb. lots or more ... lb.	.61	-
Manganese dioxide, nat., African, grd., 74%-76% MnO_2, 100-lb. bgs., l., works ... ton	200.00	380.00
84% MnO_2, same basis ... ton	250.00	-
Manganese dioxide, syn., cryst., battery grade, 90%-92% MnO_2, 100-lb. bgs., c.l., works ... lb.	.70	.87½
chemical, ferrite grade, same basis ... lb.	.49	.61
Manganese gluconate, FCC grade, 100-lb dms., f.o.b. works ... lb.	3.60	-
Manganese hydrate dms., divd ... lb.	.35	.38
Manganese hypophosphite, NF, dms ... lb.	8.75	-
Manganese metal, electrolytic, No. 1 chip, bulk, c.l., works ... lb.	.39¼	-
dms., c.l., works ... lb.	.3435	-
Manganese naphthenate, liq., 6% Mn, dms., divd ... lb.	.67	-
Manganese resinate, fused, 3½% Mn. dms., frt. alld ... lb.	.34½	-
prec. 6½-7% Mn. dms. ... lb.	.42	-
Manganese sulfate, fertilizer grade, run-of-pile, 75%-78% $MnSO_4$, 25 kilo bgs., 50-ton cars, divd. E. of Miss. ... ton	280.00	-
bulk, hopper cars, same basis ... ton	245.00	-
Manganese sulfate, 28% Mn. gran., bgs., c.l., t.l., works ... ton	330.00	-
Manganese tallate, liq., 6% Mn, dms., frt. alld ... lb.	.60	-
Mannitol, coml., powd., dms., t.l., works ... lb.	3.02	-
Marjoram, French ... lb.	.86	.89
Egyptian ... lb.	.61	.82
MBT (see 2-Mercaptobenzothiazole).		
MBTS (see Mercaptobenzothiazyl disulfide).		
MDI (see Diphenylmethane 4,4,-di-isocyanate)		
Melamine, bgs., c.l., t.l., 40,000-lb. min., f.o.b. works ... lb.	.51½	.59½
bulk, c.l., t.l., same basis ... lb.	.50	.58
Melamine-formaldehyde resin, g.p., t.l. frt. alld ... lb.	.55	.60
molding compounds, same basis ... lb.	.46½	-
Menhaden oil, crude, tanks, works Atlantic Coast ... lb.	.12	-
Gulf ports, same basis ... lb.	.13	-
Menthol, nat., USP, Brazilian large and regular crystals, spot, cs., bulk ... lb.	6.50	6.75
syn., USP, racemic, 100-450 lbs. ... lb.	9.00	-
2-Mercaptobenzothiazole, bgs., t.l., works, frt. alld ... lb.	1.25	1.55
Mercaptobenzothiazyl disulfide t.l., dms., works, frt. alld ... lb.	1.33	1.66
Mercuric chloride NF, gran., powd., 100-lb. dms., f.o.b. works ... lb.	6.50	-
Mercuric oxide, red, purif., 100-lb. dms., f.o.b. works ... lb.	7.00	7.25
tech., 100-lb. dms., same basis ... lb.	5.50	7.00
yellow, NF, 100-lb. dms., same basis ... lb.	7.00	7.25
tech., 100-lb. dms., same basis ... lb	5.50	7.50
Mercurous chloride (see Calomel).		
Mercury, ammoniated (see White precipitate USP XV).		
Mesityl oxide, tanks, divd ... lb.	.46	-
Methacrylic acid, glacial, 99%, dms., t.l. frt. equald ... lb.	.87	-
tanks, works, frt. equald ... lb.	.78	-
d-Methamphetamine hydrochloride, dms. ... lb.	12.00	16.00
dl-Methamphetamine hydrochloride, dms. ... lb.	4.50	7.00
Methanol, syn., barges, f.o.b. producing point, Gulf Coast ... gal.	.28	-
Methenamine (see Hexamethylenetetramine).		
Methionine hydroxyanalogue, dry, 86% activity t.l., frt. alld ... lb.	86	-
liquid, 88% activity, t.l. frt. alld ... lb.	88	-
Methionine (see Racemethionine)		
Methoxychlor, 50% wettable powder, dealers, dms ... lb.	2.05	-
Methyl abietate, non-ret. dms., c.l., divd. E. ... lb.	9.40	-
Methyl abietate, hydrogenated, non-ret. dms., l.c.l., same basis ... lb.	10.00	-
Methyl acetoacetate, East, divd. bulk ... lb.	.85	-
Methyl acrylate, tanks, divd ... lb.	66.00	-
Methyl alcohol (see Methanol)		
Methyl amyl alcohol, tanks, divd ... lb.	.55	-
Methyl n-amyl ketone, tks., divd ... lb.	.54½	-
Methyl anthranilate, tech., dms., f.o.b ... lb.	1.41	2.65
Methyl benzoate, dms., t.l. ... lb.	.25	-
99%, perf. grade, dms., t.l. ... lb.	1.65	-
Methyl bromide, dist., tanks, 140,000 lbs. min., frt. alld ... lb.	.50½	-
Methylcellulose, premium, USP (visc. 400 through 4,000 cps) 50 lb. bags, tl., cl., 30,000 lb., min., divd., zone 1 ... lb.	2.73	-
Methylcellulose, premium USP (visc. 15 cps) 50 lb. bags, tl., cl., 30,000 lbs., divd., zone 1 ... lb.	2.85	-
Methylcellulose, (visc. 400 through 4,000 cps) 50 lb. bgs., tl., cl., 30,000 lbs., divd., zone 1 ... lb.	2.24	-
Methylcellulose (visc. 15 to 25 cps) 50 lb. bags, tl., cl., 30,000 lb. min., divd., zone 1 ... lb.	2.52	-
Methyl chloride, indust. bulk, tanks, f.o.b. works ... lb.	.26½	.28
Methylchloroform (see 1,1,1-Trichloroethane).		
Methyl cinnamate, dms. ... lb.	4.65	-
Methyl p-cresol, dms. ... lb.	6.00	-
Methyl ethyl ketone, tanks, divd, E. ... lb.	.235	-
Methyl eugenol, 25-lb. cns ... lb.	3.55	3.80
Methyl formate, pure, non-ret. dms., works ... lb.	.41	-
tanks, same basis ... lb.	.29	-
tech., tanks, works ... lb.	.31	-
Methylheptenol, syn., 55-gal. dms. ... lb.	14.50	-
Methylheptenone, pure, dms ... lb.	7.30	-
Methylheptin carbonate, dms. ... lb.	45.00	-
Methyl p-hydroxybenzoate (see Methylparaben)		
Methylionone, std., dms. ... lb.	7.30	9.40
Methyl isoamyl ketone, tanks, divd. E. ... lb.	.51	-
Methyl isobutyl carbinol (see Methyl amyl alcohol).		
Methyl isobutyl ketone, tanks, divd. ... lb.	.35	-
divd. zone 2 (Calif.) ... lb.	.38	-
divd. zone 3 (W. of Rockies, excluding Calif.) ... lb.	.41	-
Methyl isoeugenol, 25-lb. cns ... lb.	6.60	10.40
Methyl methacrylate, tanks, divd ... lb.	.62	-
Methyl naphthyl ketone, cryst., dms. ... lb.	14.00	-
Methylparaben, USP, 500 kilograms, f.o.b. ... kilo	10.14	-
tech., 500 kilograms, f.o.b. ... kilo	9.70	-
Methylparathion, tech., 80%, dms., frt. alld. E. ... lb.	1.65	-
Methyl phenylacetate, dms. ... lb.	3.60	5.40
N-Methyl-2-pyrrolidone, tanks, f.o.b. plant ... lb.	1.32	-
dms., c.l., t.l., same basis ... lb.	1.40	-
Methylrosaniline chloride, USP, 1-lb. cans ... lb.	5.60	-
Methyl salicylate, NF, 1000-lb. dms., t.l., frt. alld ... lb.	1.79	1.94
Methyl violet (see Methyl rosaniline chloride).		
Methyl violet toner, molybdated, PMA, bbls., divd. E. of Rockies. ... lb.	3.26	-
Methyl violet toner, tungstated, PTA, bbls., same basis ... lb.	4.70	5.20
4,4,-Methylene dianiline (p,p-diaminodiphenyl methane) crude, dms., t.l., f.o.b. ... lb.	1.75	-
purif., flake, same basis ... lb.	2.25	-
Methylene di-p-phenylene di-isocyanate (see diphenylmethane 4,4,-di-isocyanate).		
Methylene chloride, tanks, 4,000 gal.-min., consumers, divd ... lb.	.35	-
Methylpentanediol (see Hexylene glycol).		
Methylphenylpyrazolone (see 1-Phenyl-3-methyl-pyrazolone-5).		
a-Methylstyrene, f.o.b. shipping pt. ... lb.	.44	-
p-Methylnaphthalene, bulk, works. ... gal.	1.38	-
Methylthionine chloride (see Methylene blue).		
Mica, dry-grd., joint cement, plastic, 50 lb., bgs., c.l., works ... lb.	.07½	-
dry-grd., roofing, 20 to 80 mesh, works ... lb.	.07	-
paint or lacq., wet-grd., 325-mesh, bgs., c.l., f.o.b. works ... lb.	.16¾	-
rubber, bgs., c.l., f.o.b. works ... lb.	.16¾	-
wallpaper, bgs., c.l., f.o.b. works. ... lb.	.22	-
Microcrystalline wax, petroleum, coating grades, FDA, tanks, works ... lb.	.36½	.46½
laminating grades, FDA, tanks, works ... lb.	.38½	.48
Mineral oil, white, 50-65 vis., USP light tanks, refy ... gal.	2.18	-
65-75 vis., tanks, refy ... gal.	2.22	-
80-90 vis., tanks, refy ... gal.	2.25	-
145-155 vis., tanks, refy ... gal.	2.33	-
USP 180-190 vis., tanks, refy ... gal.	2.34	-
200-210 vis., tanks, refy ... gal.	2.36	-
340-350 vis., tanks, refy ... gal.	2.45	-
Mineral spirits, petroleum, odorless, tanks, New Jersey ... gal.	1.83	1.88
Houston, Tex. ... gal.	1.78	1.79
Mineral spirits, petroleum, regular, tanks, New Jersey ... gal.	1.41	1.49
Houston, Tex. ... gal.	1.41	1.43
Molybdate orange, bbls ... lb.	1.52	1.95
Molybdenum metal, com.l., powd., 99.8%, dms., works ... lb.	13.50	-
Molybdenum trioxide, CP, dms., works, 24,000 lbs. or more ... lb.	5.25	-
tech., chemical, dms., 24,000 lbs. or more, basis ... lb.	2.65	2.85
tech. metallurgical, dms. same basis ... lb.	2.65	2.85
Molybdic acid (See Ammonium Dimolybdate)		
Monoammonium phosphate, fert. grade, min. 13% N. 52% P. bulk, c.l., f.o.b. Fla. works ... ton	155.00	-
Monoammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald ... 100 lbs.	54.00	-
food grade, bgs., c.l., t.l., same basis ... 100 lbs.	59.25	-
Mono-tert-butyl-m-cresol, bulk, t.l. ... lb.	1.69	-
Monobutylamine, bulk, divd ... lb.	.95	1.00
Monochloroacetic acid, purif. (see Chloroacetic acid, mono).		
Monochlorobenzene, tanks, f.o.b. ... lb.	42½	-
Monoethanolamine, tanks, frt alld E. ... lb.	.43	.46
Monoethylamine, 70% aqueous tanks, frt prepaid, 100% basis ... lb.	.94	-
anhyd., tanks, same basis ... lb.	.92	-
Monoisopropanolamine, dms., c.l., frt. alld. E. ... lb.	.76	-
tanks, same basis ... lb.	.66	-
Monoisopropylamine, anhyd., dms., c.l., frt. prepaid ... lb.	.79	-
tanks, same basis ... lb.	.76	-
Monomethylamine, anhyd., tanks, contained basis frt. equald ... lb.	.54½	-
25% soln., tanks, frt. alld. 100% basis ... lb.	.57	-
40-60% soln., tanks, frt. equald. 100% basis ... lb.	.63½	-
Monopotassium glutamate, dms., 990 lb. or more, frt. alld ... lb.	2.50	-
Monosodium glutamate, 50-lb. bgs. c.l., t.l., divd ... lb.	.76	.80
100-lb. drums, c.l., t.l., divd ... lb.	.85	-
Monosodium phosphate (see Sodium phosphate, monobasic).		
Montan wax, crude, imp., German ... lb.	.55	.57
dom., Calif., bgs., c.l., t.l., f.o.b. shipt. pt. ... lb.	.61	-
refd., dom. Calif., same basis ... lb.		
Morphine alkaloid, NF, 25 k lots ... kilo	1018.00	-
Morphine sulfate, USP, 25 k lots ... kilo	850.00	-
Morpholine, dms., c.l., frt. alld E. ... lb.	1.02	-
tanks, frt. alld., E. ... lb.	.94	-
Muriatic acid (see Hydrochloric acid).		
Musk, syn., ambrette, 28-lb. cns. ... lb.	6.00	7.00
Musk, syn., ketone, dms. ... lb.	10.75	-
Musk, syn., xylol, dms. ... lb.	3.60	-
Mustard oil, syn. (see Allylisothiocyanate).		
Mustard seed, Brown No. 1 ... lb.	.20	-
Canadian No. 1 Yellow ... lb.	.21	-
Oriental No. 1 bgs ... lb.	.20	-
Myrcia oil (see Bay oil).		
Myristic acid, coml., pure, t.l., bgs. ... lb.	1.30	-
tanks ... lb.	1.12	-
Myristica oil (see Nutmeg oil).		
Myrrh gum, bgs. ... lb.	2.25	-

N

Naphtha, high solvency (see Solvent naphtha, petroleum).		
Naphtha, petroleum, cleaners (see Cleaner's naphtha).		
Naphtha, VM&P, petroleum, tanks, New Jersey and New York ... gal.	1.29	1.34
Houston, Tex. ... gal.	1.20	-
Naphthalene, crude, dom., 78°, tanks, works ... lb.	.22	-
Naphthalene, phthalic anhydride grade, tanks, works ... lb.	.23½	-
Naphthalene, petroleum, 80°C., f.o.b. ... lb.	.30	.32½
Naphthalene, refd., balls, flakes, wholesalers, jobbers, dms., works ... lb.	.66	.77
Naphthenic acid, crude, bulk, works ... lb.	.30	.43
refined, 220 acid, same basis ... lb.	.80	.90
a-Naphthol, ground, dms., t.l. divd. ... lb.	1.81	-
b-Naphthol, tech. flake, 80-lb. bgs., c.l. works ... lb.	1.10	-
Naphthol arylide red toner deep shades, bbls ... lb.	13.40	15.45
light shades, bbls ... lb.	9.20	13.00
2-Naphthol-3,6-disulfonic acid, disodium salt (see R salt).		
1-Naphthol-5-sulfonic acid (see L- acid).		
1-Naphthol-5-sulfonic 8-amino acid (see S acid).		
Naphthylamine sulfonic mixed acid (see Cleve's acid).		
a-Naphthylamine, tanks, f.o.b. works ... lb.	2.10	-
1-Naphthylamine-5-sulfonic acid (see Laurent's acid).		
2-Naphthylamine-4,8 disulfonic acid (see Cassella acid).		
2-Naphthylamine-1-sulfonic acid (see Tobias acid).		
Neatsfoot oil, 20°F, t.l., f.o.b. works dms. ... lb.	.52	-
tanks, f.o.b. works ... lb.	.47	-
30°F, t.l., f.o.b. works ... lb.	.52	-
tanks, f.o.b. works ... lb.	.44	-
40°F, dms., t.l., f.o.b. works ... lb.	.48	.49
tanks, f.o.b. works ... lb.	.39	-
Delivered prices apply on shipments within 300-mile radius of Philadelphia, Pa.; other areas, 1¼c. higher; Texas, 2c. higher and West Coast 3c. higher.		
Neomycin sulfate, USP, non-sterile, dms., 50-kilo. lots, activity basis, divd ... kilo	75.00	-
Neopentyl glycol, slurry, 90%., c.l., t.l., divd ... lb.	.522	-
powder, flake, bgs. t.l., divd ... lb.	.598	
Nerol, tech., dms. ... lb.	5.30	5.75
perf. grade, dms. ... lb.	4.60	5.00
Neroli oil, Tunisian, bots ... kilo	2,700.00	-
Nerolidol syn. 55-gal. dms. ... lb.	7.05	-
Nerolin, Bromelin ... kilo	7.22	-
Niacinamide, USP, t.l. dms ... kilo.	8.00	-
Niacin NF, dms., 5,000 kilos or more, divd ... kilo	7.50	-
feed-grade, 98-99.5%, bgs., same basis ... kilo.	5.10	5.50
Nickel acetate, dms., 5,000-lbs. to t.l., divd. E. ... lb.	1.82	-
Nickel carbonate, dms., bgs., 5,000-lbs. to t.l., divd. E. ... lb.	3.45	-
Nickel chloride, bgs., 10,000-lbs. to t.l., divd. E. ... lb.	1.19	-
Nickel fluoborate, liq. conc., dms., t.l., divd. E. ... lb.	1.25	-
Nickel metal, electro cathodes, cs., works ... lb.	3.45	-
Nickel nitrate, dms., bgs., t.l., divd E. ... lb.	1.18	-
Nickel oxide, 75%-78% Ni, dms., 500-lb. lots, f.o.b. works ... lb.	2.60	-
Nickel sulfate, bgs., t.l., divd. E. ... lb.	.80	.90
Nicotinic acid (see Niacin).		
Nicotinamide (see Niacinamide).		
Nitric acid, 36° Be., 38°Be, 40°Be, 42°Be. tanks, c.l., works NF. 100% basis ... ton	195.00	-
94½% to 98% HNO_3, tanks, works, 100% basis ... ton	280.00	-
o-Nitroaniline, flake, dms., t.l. works ... lb.	1.51	-
molten, refd., tanks, works ... lb.	1.44	-
molten, tech., works ... lb.	1.37	-
o-Nitroaniline, orange toner, bgs., frt alld ... lb.	1.90	-
p-Nitroaniline, dms, c.l, t.l., 30,000 lb. min., works ... lb.	1.63	-
o-Nitroanisole, 100-kilo lots ... kilo	8.75	-
Nitrobenzene, tanks, f.o.b. ... lb.	.33	34
o-Nitrochlorobenzene, dms., t.l., c.l., f.o.b. ... lb.	.82	-
tanks, same basis ... lb.	.74	-
2-Nitro-p-cresol, tech., dms., t.l., frt. alld ... lb.	1.75	-
Nitroethane, tanks, divd. E. ... lb.	2.50	-
Nitrogen solutions, direct application, over 32% N, and mgf. type, works ... unit-ton.	1.20	-
direct application, 19-32% N. ... unit-ton.	1.26	1.46
Nitrogenous sewage sludge, processed, bulk, f.o.b. Chicago ... unit ton	4.10	-
NOTE: Price is per unit NH_3 plus $1, per unit a p.a. bulk, f.o.b. producer,s works, Chicago.		
Nitrogenous tankage, processed, bulk, per unit-ton NH_3, f.o.b. Carrollville, Wisc. ... unit ton	7.00	-
f.o.b. Forbes, Me. ... unit ton	6.75	-
expanded, bulk, c.l., per unit-ton N, f.o.b. Forrestdale, R.I. ... unit ton	8.35	-
Nitromethane, dms., t.l., divd. E. ... lb.	2.37	-
o-Nitrophenol, dms., f.o.b. works ... lb.	1.00	-
p-Nitrophenol, dms., c.l., f.o.b. works ... lb.	1.05	1.45
2-Nitropropane, tanks, frt. alld. E. ... lb.	.55	-
m-Nitrotoluene, tech., dms., frt. alld. ... lb.	1.15	-
o-Nitrotoluene, dms., c.l., f.o.b. ... lb.	.65	-
tanks, same basis ... lb.	.48	.57
p-Nitrotoluene, tech. dms., c.l., works ... lb.	.83	.85
tanks, works ... lb.	.70	-
Nonylphenol, tanks, f.o.b. E. of Rockies, min. frt. alld ... lb.	.49	.53½
Norephedrine hydrochloride (see Phenylpropanolamine hydrochloride)		
Nutmeg oil, dist., East Indian, NF, dms. ... kilo	32.00	34.00
Nutmegs, East Indian, whole ... lb.	3.10	3.15

O

Ochre (see Iron oxide, yellow, nat.)		
Ocotea cymbarum oil dms. ... kilo	5.15	5.20
Ocotea, Chinese 90% ... kilo	5.20	-
1-Octadecanol, syn., tanks, f.o.b. ... lb.	.43½	-
l-Octanol, syn., tanks, f.o.b. ... lb.	.70	-
n-Octane, 97% min., tanks, f.o.b. Houston, Tex. ... gal.	6.25	-
Octyl alcohol, perfumer's grade, bots., cns ... lb.	1.40	1.75
n-Octyl, n-decyl phthalate, tanks, divd ... lb.	.33½	.37
tert-Octylamine, dms., c.l., t.l., works.	2.60	-
Octylphenol, molten, f.o.b., works ... lb.	.75	.76½
Oiticica oil, liq. dms ... lb.	.40	-
tanks ... lb.	.32	-
Oleic acid, dbl.-dist., (white), dms. ... lb.	.46	.59
tanks ... lb.	.38	.44
Oleic acid, s.d., (red) dms. ... lb.	.43	.49
tanks ... lb.	.35	.41
Oleum (see Sulfuric acid, fuming).		
Olibanum gum, tears, bgs. ... lb.	2.10	-
Olive oil, edible, Spanish, dms. ... gal.	8.00	-
Italian B-type ... gal.	5.35	-
Olivine, crude, works ... ton	12.00	-
20 mesh, works ... ton	15.00	-
100 mesh, works ... ton	20.00	-
Opium, USP, gran. powd. 25-kilo lots ... kilo	125.00	-
Orange oil, expressed, USP, Calif., dms., f.o.b. plant ... lb.	1.20	-
expressed Valencia, dms. ... lb.	.75	-
Calif., dist., cns. f.o.b. plant ... lb.	1.25	-
Florida, dms. ... lb.	.60	.65
Brazilian ... kilo	.90	-
West Indian, bitter, NF X, cns., dms. ... lb.	13.00	-
Orange peel, bitter, Haitian bls. ... lb.	.38	-
Oregano, Greece, 30M ... lb.	2.80	-
Turkey ... lb.	2.80	-
Mexico ... lb.	1.05	-
Origanum oil, Spanish, cns. ... kilo	35.00	-
Orris root, Florentine, bls. ... lb.	4.00	-
powd., bbls., bxs. ... lb.	4.60	5.00
Verona bls. ... lb.	3.00	-
powd., bbls., bxs. ... lb.	4.60	5.00
Ouricury wax, refd., pure, bgs. ... lb.	3.25	3.35
Oxalic acid, bgs., c.l., works ... lb.	.44	-
b-Oxynaphthoic acid dms works, tech. ... lb.	2.55	-
Oxyquinoline base, pure, 1,000 lbs., frt. alld ... lb.	8.00	-
Oxyquinoline sulfate, 100 lbs. frt. alld ... lb.	4.00	-

P

Palladium metal, works ... Troy-oz.	118.00	-
Palm oil, (see Oils, Fats & Waxes Market Report)		
Palm oil acid, dbl-dist. dms. ... lb	31½	-
tanks ... lb	30	-
s.d., dms ... lb	42	.45
tanks ... lb	.35	-
Palm kernel oil, bulk, c.i.f., U.S ports ... lb	18½	19¼
Palmarosa oil, Indian dms ... kilo	42.00	-
Palmitic acid, 90%, tech., bags ... lb	.53	-
tanks ... lb.	.51	-
Papaverine hydrochloride, NF powd., imp bulk ... kilo	56.00	-
Paprika, Hungarian, 100 AU bgs ... lb	.80	-
Spanish, 110 AU bgs ... lb	.90	-
Paraffin, fully-refd., 127-130F., ASTM, tanks, refy ...	.29	35
130-135F., ASTM, tanks, refy	33½	39
140-145F., ASTM, tanks, refy	.35	.41½
150-155F., ASTM, tanks, refy.	41½	.46
slack wax, 5% oil, tanks refy ...	19	-
12% oil, tanks refy ...	21	-
20% oil, tanks refy ...	.16	-
AMP temperatures are an arbitrary 3F higher than ASTP.		
Paraformaldehyde, 91%, flake, bgs. c.l., t.l., divd ... lb	.29½	-
95%, powd., bgs., c.t., t.l. divd. ... lb	39½	-
Paraldehyde, tech., 98%, 55-gal. dms., t.l., divd. E. ... lb	.76½	-
tanks, divd E. ... lb	58½	-
Parathion, ethyl, dms., frt. alld. ... lb.	1.75	-
Parathion methyl (see Methyl parathion).		
Para toner red, bbls. ... lb.	3.75	-
chlorinated, (red 4) kgs ... lb.	3.75	-
Patchouli oil, Indonesian, dms ... kilo	18.50	20.00
Patchouli oil, Chinese ... kilo	19.00	21.00
Peach kernel oil, USP (see Apricot kernel oil).		
Peanut meal (see Oils, Fats & Waxes market report).		
Peanut oil (see Oils, Fats & Waxes market report).		
Pectin dom., NF, citrus, powd., 100-kilo lots divd. ... lb.	3.30	3.70
Pelargonic acid, nat., tanks, min. frt. alld. ... lb.	.70	-
syn., tanks, f.o.b. frt. alld ... lb.	.70	-
Penicillin, potassium, non-sterile, 200-billion-unit lots ... billion units	25.00	30.00
Penicillin, procaine, sterile 50-billion-unit lots, bulk ... billion units.	36.00	-
Pennyroyal oil, dms. ... lb.	10.25	-
Pentachlorophenol, 50-lb. bgs., t.l., f.o.b. Wichita, Kan. ... lb.	.65	-
Pentaerythritol, tech., bgs., c.l., f.o.b., frt. alld ... lb.	.71	.72
Pentaerythritol, di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).		
Pentaerythritol triacrylate, t.l. dms., f.o.b. works ... lb.	1.50	-
Pentobarbital, dms., 100 lbs. or more, frt. alld ... lb.	7.00	-
Pentobarbital-sodium, dms., 100 lbs. or more, divd ... lb.	14.00	-
Pentylene tetrazol, NF, dms., 200-kilo lots ... kilo	32.00	-
Pepper, black, Brazilian, bgs. ... lb.	2.46	-
Lampong, bgs. ... lb.	2.48	-
Malabar, bgs. ... lb.	2.48	-
Tellicherry, bgs. ... lb.	2.85	-
Pepper, red Chinese Fukien rice bgs ... lb.	.79	-
Hainan, bgs. ... lb.	.85	-
Liling, bgs. ... lb.	.76	-
Indian, S-4, bgs. ... lb.	.60	-
Pakistan, dundicuts, bgs. ... lb.	.58	-
Pepper, white, Muntok, bgs. ... lb.	2.97	-
Peppermint leaves, imp., dms. ... lb.	2.00	-
Peppermint oil, Madras ... lb.	14.00	-
Midwest ... lb.	15.00	-
Willamette ... lb.	11.00	-
Yakima ... lb.	8.75	-
syn., dms. f.o.b. works ... lb.	7.00	9.00
Brazilian ... kilo	8.50	-
Chinese ... kilo	8.90	-

CHEMICAL PRICES
WEEK ENDING DEC. 12, 1986

CHEMICAL PRICES

WEEK ENDING DEC. 12, 1986

Perchloroethylene, dry cleaning grade, distr., tanks, divd. lb.	.28½	-
Indust., grade, consumers, tanks, divd. lb.	.31	-
Peri acid. dms. lb.	2.55	-
Permanent red 2B, (red 48), calcium salts, dms., frt. alld. lb.	5.25	-
barium salts, same basis lb.	5.25	-
Peru balsam, f.o.b. lb.	3.25	-
Petitgrain oil, Paraguay lb.	6.00	-
Petrolatum, USP, snow white, dms., c.l., refy lb.	.365	-
tanks, refy lb.	.300	-
USP, soft white, dms., c.l., refy lb.	.365	-
tanks, refy lb.	.300	-
USP, lily white, dms., c.l., refy lb.	.360	-
Petrolatum, USP, Lilly white, tanks, refy lb.	.295	-
USP, cream, dms., c.l., refy lb.	.355	-
tanks, refy lb.	.290	-
USP, soft yellow, dms., c.l., refy lb.	.340	-
tanks, refy lb.	.275	-
USP, amber, dms., c.l., refy lb.	.335	-
tanks, refy lb.	.270	-
Petroleum pitch (see Asphalt, petroleum).		
Petroleum sulfonate, 60-62%, sulfonic cont., HMW, bulk, works lb.	.48¼	.49
MMW, same basis lb.	.49	-
LMW, same basis lb.	.49	.49¼
Prices for 51% sulfonic content 2c per lb. lower on corresponding molecular wts.		
Phenacetin USP, powd., 200-lb. dms., 1,000-lb. lots, divd. lb.	2.20	-
100-lb. dms., 1,000-lb. lots, divd. lb.	2.22	2.45
p-Phenetidine, dms., c.l., f.o.b. lb.	2.00	-
Phenobarbital, USP, dms., 500-kilo lots., f.o.b. works kilo	19.50	-
Phenobarbital-sodium, NF, 500-kilo lots, f.o.b. works kilo	27.00	-
Phenol, syn tanks, frt. equald. lb.	.25	.29
p-Phenolsulfonic acid, 65% sol'n., dms., c.l., fob works lb.	.64	-
tanks, same basis lb.	.58	-
Phenothiazine, indust. grade, 50-lb. bags, c.l., f.o.b. works lb.	2.33	-
purif. grade, same basis lb.	2.69	-
Phenyl acetate, dms., 100-lb. lots, works lb.	1.04	-
Phenylacetic acid, pure cryst., 25-lb cns. lb.	4.50	-
dl-Phenylalanine, dms., 25-kilo lots kilo	84.00	-
1-Phenyl-3-carbethoxy pyrazolone-5, dms. 200-lb. lots, divd. E. lb.	3.45	-
m-Phenylenediamine, cast, dms., c.l., t.l., f.o.b works lb.	2.07	-
o-Phenylenediamine, flaked, dms., t.l., f.o.b. works lb.	3.25	-
p-Phenylenediamine, flaked, dms., f.o.b. works lb.	4.00	-
Phenylephrine hydrochloride, USP 100-kilo lots or more kilo	175.00	185.00
Phenylethyl acetate, dms. lb.	3.35	-
2-Phenylethyl alcohol, NF, dms. lb.	2.10	2.20
b-Phenylethylamine, dms., 30,000 lbs. or more, frt. alld. lb.	1.50	-
Phenylethylphenyl acetate, 25-lb. cns lb.	5.50	6.90
Phenylglyconic acid (see Mandelic acid).		
Phenylhydrazine, 99% min., dms. lb.	3.50	-
1-Phenyl-3-methyl-5-pyrazolone, dms., 250-lb. lots divd. E. lb.	1.80	-
o-Phenylphenol, dms., t.l., works lb.	1.35	2.00
p-Phenylphenol, bgs., t.l., 40,000 lbs. or more, works lb.	1.85	-
Phenylpropanolamine hydrochloride, 100-kilo dm. kilo	24.00	28.00
Phenylsalicylate, purif. cryst., dms., E. lb.	2.75	-
tech., cryst., E. lb.	2.26	-
flake, E. lb.	2.35	-
Phloxine toner (red 90), dms., frt. alld. lb.	1.95	2.05
Phosgene, 1-ton ret. cyls., 5 to 9-cyl. quantities, works lb.	.55	.67
Phosphate rock, Fla., land pebble, run of mine washed, 66-68% b.p.l. bulk c.l. mines ton	23.15	-
vessel, Tampa, same basis ton	28.00	-
Phosphoric acid, com'l. and tech. grades, 75% tanks, works 100 lbs.	29.00	-
80% tanks, works 100 lbs.	31.00	-
85%, N.F. tanks, f.o.b. freight equald. 100 lbs.	33.50	-
Food grade prices $2.00 above tech. grade.		
Phosphoric acid, agricultural grade, 52-54% a.p.a., tanks, works unit-ton	3.10	-
super, min. 70% a.p.a., same basis unit-ton	3.45	-
Phosphorus, white (yellow) solid dms., c.l., works, frt. equald. lb.	1.00	-
tanks, works, f.o.b. works lb.	.91	-
Phosphorus oxychloride, tanks, frt. equald. lb.	.40	-
Phosphorus pentasulfide, powd., dms., c.l., works 100 lbs.	60.00	-
tote bins, sellers 100 lbs.	45.00	-
Phosphorus pentoxide, dms., t.l., works lb.	.82	-
Phosphorus sesquisulfide, dms., cvs., c.l., works lb.	.38	-
Phosphorus trichloride, dms., c.l., works lb.	.40	-
tanks, works lb.	.35	-
Phthalic anhydride, flake, c.l., t.l., dms., frt. equald. lb.	.30	-
molten, tanks, same basis lb.	.27	-
Prices 1-1½c. per lb. higher on the West Coast		
Phthalimide, flake, works lb.	.85	-
Phthalocyanine blue toner, red shade, bbls., frt. alld. E. of Rockies lb.	9.45	
green shade, same basis lb.	9.30	
resinated, bbls., same basis lb.	9.10	
Phthalocyanine blue toner, water dispersable, bbls., same basis lb.	9.45	17.30
Phthalocyanine green toner, all grades, bbls., frt. alld. E. of Rockies lb.	9.30	14.00
Phthalocyanine green toner, resinated, bbls., same basis lb.	8.65	9.45
Phthalylsulfacetamide, dms., 500-kilo lots kilo	8.61	-
Picolines, refd, mixed, bulk kilo	2.81	-
Picric acid, pure paste, 25-lb. ctns., c.l., dry basis, f.o.b. Charlotte, N.C. lb.	6.00	-
tech., paste, 25-lb. ctns., t.l., dry basis, f.o.b. Charlotte, N.C. lb.	5.00	-
Pigment green B, kgs. lb.	2.20	-
Pilocarpine hydrochloride, USP, dms. kilo	1,500.00	2,000.00
Pimento see Allspice		
Pimento leaf oil, dms. lb.	13.90	-
Pine oil, 80% min. alcohol content, bulk, f.o.b. works 100 lbs	47.00	53.00
dms., c.l., t.l., same basis 100 lbs	51.00	54.00
a-Pinene, perfume grade kilo	1.82	-
tech. grade lb.	.18	.23
b-Pinene, perfumery grade, tanks kilo	2.30	-
tech. grade, tanks lb.	.35	.40
Piperazine, anhyd., dms., t.l., frt. alld. E. lb.	1.80	-
Piperazine citrate, 36%, dms., 1,100-lb. lots, frt. alld. lb.	2.25	2.35
Piperazine dihydrochloride, 53%, dms., t.l., frt. alld. lb.	2.00	-
Piperazine hexahydrate, 44%, dms., 1,100-lb. lots, frt. alld. lb.	1.80	-
Piperazine phosphate, 42%, dms., t.l., frt. alld. lb.	1.80	-
Piperidine dist. 98% min., dms., c.l., t.l., works kilo	6.92	-
Piperonyl butoxide dms., divd. E. lb.	5.00	-
Platinum, metal, works Troy oz.	486.00	-
Polycarbonate resin, pellets, nat., t.l., frt. alld lb.	1.84	1.88
Polyester resin, unsaturated, g.p., orthophthalic, bulk, tankcars, frt. alld lb.	.51	.53
isophthalic, same basis lb.	.56	.62
Polyethylene resin, high-density, blow molding, g.p., hopper cars, frt. alld. lb.	.44	.52
injection molding, g.p., hopper cars, frt. alld. lb.	.43	.46
extrusion, g.p., hopper cars, same basis lb.	.47	.48
wire and cable, nat., hopper cars, same basis lb.	.54	.65
wire and cable, black, same basis lb.	.65	.75
Polyethylene resin, low-density, film liner, hopper cars, frt alld lb.	.35	.38
clarity film, hopper cars, frt., alld. lb.	.35	.37
pallet shrink film, hopper cars, same basis lb.	.35	-
extrusion coating, hopper cars, same basis lb.	.38	.42
g.p., hopper cars, same basis lb.	.37	.38
Polyethylene linear low-density g.p. resin	.36	.40
blown film resin	.40	.43½
cast film resin	.40	.45
Polyethylene resin, low-density injection molding, g.p., hopper cars, same basis lb.	.45	.48
line wire, CATV, power cable lb.	.70	1.15
wire and cable thermoplastic high-voltage, natural color, same basis lb.	.80	.90
wire and cable, XLPE low voltage, 14% carbon black, same basis lb.	.68	.73
wire and cable jacketing, black lb.	.60	.61
Polymyxin sulfate, USP, bulk, 50-billion units min. million units	.52	-
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works lb.	.73	-
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb. lots, works lb.	.73	-
Polypropylene resin, homopolymer, g.p., nat., t.l., frt. alld lb.	.45	.48
copolymer, med. impact, nat., same basis lb.	.50	.56
high impact, same basis lb.	.53	.60
Colored material 6c. per lb. higher for each grade.		
Polystyrene resin, cryst., nat., hopper cars, frt. alld. lb.	.48	-
impact, nat., hopper cars, same basis lb.	.51	-
high heat, high impact, nat., hop-per cars, same basis lb.	.52	-
expandable beads (EPS), pkging grade, 1,000-lb. lots lb.	.69	-
modified, same basis lb.	.73	-
Polyvinyl alcohol, fully hydrolyzed, medium viscosity, bgs., t.l., divd. lb.	1.00	1.05
partially hydrolyzed, medium viscosity, bgs., t.l., divd. lb.	1.05	-
Polyvinyl chloride resin, g.p., homopolymer dispersion, bgs., t.l., divd. lb.	.50	-
g.p. suspension, bulk, same basis lb.	.38	-
pipe grade, bulk, same basis lb.	.47	-
film grade, bulk, same basis lb.	.37	.47
Polyvinyl chloride, g.p. copolymer dispersion, same basis lb.	.58	.61
g.p. copolymer suspension, same basis lb.	.45	.49
Poppyseed, Dutch, bgs. lb.	.59	-
Turkey, bgs. lb.	.53	-
Potash agricultural (see Potassium muriate).		
Potash, caustic, liq., 45% basis, tanks, works 100 lbs.	13.00	-
West Coast, 50% basis, tanks, ex terminal 100 lbs.	18.06	-
reg. flake, 88-92%, 400-lb. dms., c.l., works 100 lbs.	42.35	-
Potassium acetate, NF, gran., dms., t.l. works E. lb.	.90	1.31
Potassium bicarbonate, tech., gran., bgs., c.l., works lb.	.31½	-
Potassium bicarbonate, USP, gran., dms., t.l. lb.	.72	-
Potassium bichromate, gran., 400-lb. dms., c.l., t.l., works lb.	.48	-
Potassium bifluoride, tech., dms., t.l., works., frt. equald. lb.	.45	.49
Potassium bitartrate, NF, gran., powd., bgs. lb.	.90	1.20
Potassium borohydride, powd. dms., 100-1,000 lbs., works lb.	18.00	20.00
Potassium bromate, gran., powd., 200-lb. dms., c.l., f.o.b. works lb.	1.06	-
Potassium bromide, NF., gran., dms., c.l. f.o.b. works lb.	1.12	-
Potassium carbonate, liq., 47% K_2CO_3, tanks, t.w., works 100 lbs.	14.60	-
dms., c.l., t.l., works 100 lbs.	20.65	-
calcined, 99-100% K_2CO_3, hopper cars or trucks, works 100 lbs.	32.50	-
bgs., c.l., t.l., works 100 lbs.	35.20	-
drums 100 lbs.	36.40	-
Potassium carbonate, gran., purif., 400-lb. dms., 5-dm. lots lb.	.40	.46
Potassium chlorate, cryst., dms., c.l., works lb.	.14½	-
powd., dms., c.l., works lb.	.30	-
purif., gran., 325-lb. dms., f.o.b. shipping point lb.	.40	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.l., f.o.b works ton	105.00	-
USP cryst. dms. lb.	1.12	-
USP gran., dms. lb.	.67	-
USP powd., dms. lb.	.67	-
Potassium chloride, agricultural (see Potassium muriate).		
Potassium chromate, purif., cryst., dms., works lb.	.67	-
Potassium citrate, NF, gran., 200-lb. dms., frt. alld. lb.	.93½	-
Potassium cyanide, dms., 20,000-lb. lots or more, f.o.b. works lb.	1.32	-
Potassium dichromate (see Potassium bichromate).		
Potassium fluoborate, tech., dms., c.l., t.l., works, frt. equald. lb.	1.40	1.42
Potassium fluoride, anhyd., dms., t.l. lb.	1.68	-
Potassium gluconate, dms., t.l., f.o.b. works lb.	1.45	-
Price W. of Denver 4c. per lb. higher.		
Potassium guaiacolsulfonate, 300-lb. dms., 600 lbs. or more frt. equald. lb.	2.10	-
Potassium hydroxide, tech. (see Potash, caustic).		
Potassium hydroxide, USP, pellets, 100-lb. dms., c.l., t.l., works, frt. equald. lb.	1.31	1.33
Potassium iodide, USP, gran., cryst., dms., 1,000-lb. lots divd. lb.	10.72	12.39
ACS grade truckload lb.	11.32	13.55
Potassium-magnesium sulfate, std., bgs., works ton	59.00	-
basis 40% K_2SO_4 and 55% $MgSO_4$ bulk, works ton	67.00	-
Potassium metabisulfate, gran., dms. t.l. lb.	.44	-
Potassium muriate, 60-62.4% min K_2O, std., bulk, c.l., frt. equald., f.o.b. Sask., Canada ton	52.00	53.00
soluble, fine std., f.o.b. Sask. ton	53.50	54.50
coarse, f.o.b. Sask. ton	57.00	58.00
gran., f.o.b. Sask. ton	58.50	59.50
Potassium nitrate, fert. grade, std., 50-ton c.l., divd. SE. ton	267.00	274.00
prilled ton	277.00	284.00
tech., gran., bgs., c.l., min. 50 tons, divd. ton	470.00	-
Potassium oxalate, neutral, tech., fine gran., powd., 300-lb. dm., frt. equald. lb.	2.54	-
Potassium pentaborate, gran., bgs., c.l., works lb.	1.01	-
dms., same basis lb.	1.06	-
Potassium pentaborate powder 15c. per lb. higher.		
Potassium perchlorate, dms. c.l., works lb.	.78	-
Potassium permanganate, free flowing, bulk, hopper trucks, works lb.	1.09	-
50-kg. dms., same basis lb.	1.20	-
150-kg. dms., same basis lb.	1.17	-
Potassium permanganate, USP, 50-lb. kgs., works, c.l., t.l. lb.	1.38	-
Potassium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant cwt.	78.80	-
c/l/tl same basis cwt.	72.50	-
Potassium pyrophosphate tetrabasic, bgs., c.l., t.l., works, E., frt. equald. 100 lbs.	63.75	64.00
liquid, bulk 100 lbs.	46.00	49.50
Potassium salicylate, USP, gran., 200-lb. dms., 2,000 lbs. or more, works, frt. alld. lb.	1.52	-
USP, powd., 300-lb. dms., 2,000 lbs. or more, same basis lb.	1.42	-
Potassium silicate, soln., 29.8-30.2 Be., 2.5 ratio, t.c., t.t., works 100 lbs.	18.90	-
dms., c.l., t.l., works. 100 lbs.	25.90	-
Potassium silicate, 40-40.5 Be., 2.1 ratio, t.c., t.t., works 100 lbs.	25.05	-
40-40.5 Be., 2.1 ratio, dms., c.l., t.l., works 100 lbs.	32.05	-
Potassium silicate, electronics grade, 30-30.4 Be., 2.1-2.2 ratio, t.c., t.l., works 100 lbs.	26.10	-
dms., c.l., t.l., works. 100 lbs.	33.10	-
solid or glass, 2.15 ratio, dms., c.l., t.l., works 100 lbs.	53.30	-
solid or glass, 2.5 ratio, dms, c.l., t.l., works	46.65	-
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of K_2O.		
Potassium silicofluoride, bgs., c.l., t.l., frt. equald. lb.	.11½	.15
Potassium-sodium tartrate, NF, gran. or powd., dms. lb.	.80	1.20
Potassium sorbate, t.l. dms., divd. lb.	2.50	3.10
Potassium stannate, dms., frt. alld. lb.	N.A.	-
Potassium sulfate, agricultural grade, min. 50% K_2O std., bulk, c.l., f.o.b. works ton	150.00	160.00
Potassium sulfate, gran., purif. 400-lb. dm. lb.	.86	-
Potassium tetraborate, gran., bgs., c.l. works lb.	1.10	-
dms., same basis lb.	1.15	-
Potassium tetraborate powder 15c. per ton higher		
Potassium thiocyanate, USP, cryst., 225-lb. dms., 5-dm. lots lb.	4.01	-
tech., cryst., dms., t.l. lb.	.62	-
Potassium titanate, ctns., c.l., works lb.	.71¾	-
Potassium-titanium fluoride, tech., dms., t.l., works, frt. equald lb.	1.24	1.59
Potassium-zirconium fluoride, tech., dms., t.l., works, frt. equald. lb.	.78	-
Prednisone USP. dms., 5 kilos or more gram	1.03	-
Prednisolone acetate, USP, dms., 5 kilos or more gram	1.12	-
Prednisolone, anhyd., USP, dms., 5 kilos or more gram	1.12	-
Procaine hydrochloride, USP, antibiotic grade, dms., 2,000-lb. lots, frt. alld lb.	4.95	5.75
Procaine hydrochloride, USP, ampule grade, dms., 1,000-lb. lots, frt. alld. lb.	4.95	5.80
Propionaldehyde, tanks, f.o.b. lb.	.35½	-
Propionic acid, syn., pure, tanks, divd. E. lb.	.33	.34½
n-Propyl acetate, tanks, divd. lb.	.53½	-
n-Propyl alcohol, tanks, divd. lb.	.42	.44
n-Propyl gallate dms., 100 to 2,000-lb. lots, divd. lb.	11.50	-
n-Propyl-p-hydroxybenzoate, USP, 500 kilos kilo	10.80	-
tech., 500 kilos, f.o.b. kilo	10.38	-
Propyl paraben (see n-Propyl-p-hydroxybenzoate)		
Propyl thiouracil, dms., 50-kilo lots or more kilo	55.00	-
n-Propylamine, dms., c.l., divd. lb.	.75	.80
Propylene, polymer grade, f.o.b. Tex. and La. Gulf Coast points lb.	.17¼	-
chemical grade same basis lb.	.15¾	.16
Propylene glycol, indust., tanks, f.o.b. lb.	.40	.42
USP, tanks, f.o.b. E. lb.	.43	.45
Propylene glycol monomethyl ether, tanks, divd. E. lb.	.49	-
Propylene oxide, tanks, f.o.b. works, frt. equald. lb.	.47½	-
Psyllium seed, USP powd bgs. lb.	1.50	1.75
Pumice, dom., fine, 4F-0, bgs., ton lots ton	270.00	-
medium, 0½-1½, bgs., ton lots ton	300.00	-
coarse, 2-extra coarse, bgs., ton lots ton	300.00	-
Pumice, imp., Italian, fines, bgs., ton lots f.o.b. East Coast ton	280.00	-
medium, bgs., ton lots, f.o.b. East Coast ton	350.00	-
coarse, bgs., ton lots f.o.b. East Coast ton	300.00	-
Pyrazolone red (red 38), dms., works lb.	13.00	15.45
Pyrethrum flowers, fine grd. 0.9% pyrethrins, ton lots, frt. alld lb.	1.91	-
Pyrethrum, purif., 20% pyrethrins, dms., works lb.	37.50	37.75
Pyridine, refd., 2-deg. c.l. works dms. kilo	5.90	-
tanks kilo	5.70	-
Pyridoxine hydrochloride, USP, 100 kilos or more, divd kilo	36.00	-
Pyrites, Canadian 48-50% S mines long ton	4.50	5.00
Pyrogallic acid (see Pyrogallol)		
Pyrogallol, 100-lb. dms., 1,000-lb., lots, divd. lb.	13.70	15.25

Q

Quassia chips lb.	.57	-
Quinacridone maroon, dms., frt. alld. lb.	27.00	35.20
red, dms., frt. alld. lb.	24.25	32.30
violet, dms., frt. alld. lb.	24.90	-
Quince seed, bgs. lb.	2.00	2.75
Quinidine sulfate, USP, 1,000-oz. dms., 2,000 oz. or more oz.	4.20	4.25
Quinine hydrochloride, NF, 1,000-oz. dms., 2,000 oz. or more oz.	2.45	2.50
Quinine sulfate, USP XVIII, 1,000-oz. dms., 2,000 oz. or more oz.	2.30	2.50
Quinoline, dms., t.l., frt. equald. lb.	1.49	-
tanks, same basis lb.	1.43	-

R

R salt tech., 304 molecular wt. lb.	2.12	-
Racemethionine, USP, 50-250 kilos kilo	6.80	-
250-500 kilos kilo	6.60	-
500 or more kilos kilo	6.50	-
feed grade, 99% min., c.l., t.l. lb.	1.07	-
Rapeseed oil, dms. lb.	.58½	.62½
Rauwolfia serpentina root, powd. bls., dms. kilo.	22.00	-
Red carmine. No. 40 (see Carmine No. 40)		
Red precipitate. (see Mercuric oxide, red).		
Reserpine, USP, cryst., bots. gram.	.40	.42½
Resorcinol tech., bgs., t.l., works. divd. kilo.	3.96	-
Resorcinol, USP, cryst., dms. 50 kilos or more, works kilo.	9.35	-
powd. dms., same basis kilo.	9.90	-
Resorcinol monoacetate, dms., 1,000 lbs. or more lb.	1.98	-
Rhodamine red toner, molybdated, PMA, dms., works lb.	9.25	-
tungstated, PTMA, dms., f.o.b. lb.	11.50	14.00
works lb.	105.00	105.10
Rhodinol, 25-lb. cns. lb.	15.25	-
syn., dms. lb.	.46	.58
Rhubarb root, India, whole, bgs. lb.	.61	.70
powd., bgs.		-
Riboflavin, feed grade, 25 kilos, divd. kilo.	34.50	-
Riboflavin, USP, 25 kilos, divd. kilo.	48.50	-
Riboflavin 5-phosphate-sodium, 25-kilo lots kilo.	136.00	-
Rice bran oil, refined dms. t.l. lb	1.25	-
Ricinoleic acid (see Castor oil acids, split).		
Rochelle salt (see Potassium-sodium tartrate).		
Roofing pitch (see Coaltar pitch, roofing.)		
Rose oil, nat., NF, Bulgarian, otto. bots. kilo.	5,700.00	-
Turkish, otto, bots. kilo.	6,500.00	7,500.00
Rosemary oil, NF, Spanish, dms. kilo	9.00	11.00
Tunisian, dms. kilo	15.00	17.50
Rotenone resin, 30-45%, 100-lb. dms. works unit-lb.	.21	.23

S

Saccharin NF, gran., soluble, dms. 1,000-lb. lots, frt. alld. lb.	2.50	2.75
Saccharin NF, powd., soluble, dms., less than 20,000-lb. lots, frt. alld. lb.	3.75	-
Safflower oil, non-break, tanks, N.Y. lb.	.50	-
edible dms., N.Y., divd. lb.	.78	.80
Sage leaves, Dalmatian, No. 1, bgs. lb.	1.95	-
Albanian, bgs. lb.	1.65	-
Turkish lb.	1.25	1.30
Sage oil, Clary, French, bots. kilo	165.00	180.00
Dalmatian, cns. lb.	14.50	-
Spanish, cns. kilo	19.00	21.00
Salicylaldehyde, tanks, f.o.b. lb.	3.60	-
Salicylamide, NF, gran., powd., dms., 2,000-lb. lots, one ship. lb.	1.07	1.10
Salicylic acid, tech., dms., c.l., t.l., works lb.	1.23	1.41
USP, cryst., dms., 1,000 lbs. or more lb.	1.33	1.63
USP, powd., dms., 1,000 lbs. or more lb.	1.68	-
Salol (see Phenylsalicylate).		
Salt, evaporated, common, 80-lb. bgs., c.l., t.l., North, works 80 lbs.	4.02	-
bulk, same basis ton	60.00	61.20
chemical grade, same basis 80 lbs.	4.30	-
Salt, rock, medium, coarse, same basis 80 lbs.	2.70	-
bulk, same basis ton	18.00	25.00
Saltcake, dom., bulk, works, 100% Na_2SO_4 basis, f.o.b. works E ton	65.00	98.00
same basis W ton	90.00	99.00
Sandalwood oil, E. Indian kilo	185.00	-
Indonesia kilo	102.00	-
Sarcosine, tech., tanks, works, frt. equald lb.	.50	-
Schaeffer's salt, paste, dms., 100% basis, works lb.	2.59	-
Scopolamine hydrobromide, USP, 100-oz. lots bots. oz.	38.00	46.50
Sebacic acid, CP, bgs., c.l., works lb.	1.95	-
purif., bgs., c.l., works lb.	1.94	-
[illegible] mixture, dms., 5,000-lb. lots lb.	.30½	-
Selenium, powd., 99.99% Se, dms., divd. lb.	13.00	-
comml., 99.5% Se, same basis lb.	10.00	15.00
Senna leaves, Alexandria, whole and half, bls. lb.	.75	.80
Tinnevelly, No. 1, bls. lb.	.70	.71
powd., bbls., bxs. lb.	.90	1.10
Sesame oil, USP, dms., l.c.l. lb.	1.00	1.20
Sesame seed, Central American, hulled, bgs. lb.	.55	.56
Sienna pigment, burnt, paper bgs., l.c.l., works lb.	.19½	.28½
Raw, paper bgs., l.c.l., works lb.	.18¼	.23¾
Silica, amorph. dry-grd., bgs., c.l., works 93%, 200 mesh ton	31.00	32.50
98%, 200 mesh ton	32.00	33.50
93%, 97%, 325 mesh ton	34.50	35.50
98.5%, 325 mesh ton	37.00	-
99.5%, 325 mesh ton	51.50	54.50
Silica, dry-grd., bgs., c.l., works, 99.9%, 400 mesh, micronized ton	72.00	75.50
99% under 15 microns, micronized ton	79.50	82.50
99% under 10 microns, micronized ton	104.00	105.00
Silica, hard-quartz, 99.5% SiO_2, 325 mesh, bgs., c.l., works ton	37.00	-
140 mesh, bgs., c.l., works ton	34.75	-
Silicon tetrachloride, tech., dms., c.l., works lb.	.50	-
tanks, works lb.	.36	-
Silver bullion, ingots, cs., Troy oz.	5.385	-
Silver cyanide, 80% Ag, 500-oz. lots oz.	4.300	-
Silver nitrate, ACS, 58.2 Troy oz. AG/100 avoir. oz. $AgNO_3$ oz.	3.223	-
Soapbark, crushed, bls. lb.	1.00	-
powd., bls. lb.	1.35	1.85
Soda ash, dense, 58%, 100-lb., paper bgs. c.l., works, f.o.b. ton	120.00	-
bulk, c.l., same basis ton	83.00	-
light 58%, 100-lb., paper bgs., c.l., same basis ton	150.00	-
bulk, c.l., same basis ton	123.00	-
Soda, caustic, liq., 50%, sellers tanks, Gulf Coast works, f.o.b., frt. equal., 76% Na_2O ton.	175.00	195.00
73%, same basis ton.	205.00	225.00
flake, 76%, 400-lb. dms, c.l, works ton.	500.00	570.00
solid, 76%, 700-lb. dms, c.l, works ton.	520.00	570.00
gran., 75%, 450-lb. dms, c.l, works ton.	520.00	-
beads, 76%, 400-lb. dms., c.l., works 100 lbs.	27.50	28.50
Prices for liq. rayon-type, $15 ton higher. Prices in West 70c. higher for solid, and $20-$30 ton higher for gran. and beads.		
Soda, sal, conc., bgs., c.l. works 100 lbs.	3.35	3.85
Sodium acetate, anhyd., bgs., c.l., f.o.b. works lb.	.54	-
Sodium acetate, USP, 60%, gran. 100-lb. dms., c.l., works lb.	.57	-
Sodium alginate, NF, white powd., dom., 300 lbs. or more lb.	6.00	6.75
Sodium p-aminosalicylate, dms., 100-lb. lots or more, f.o.b. works lb.	4.73	-
Sodium antimonate, bgs., c.l., divd. E. lb.	1.49	1.50
Sodium ascorbate, USP, dms., 100 kilos kilo.	9.30	10.50
Sodium benzoate, tech., bgs., c.l., t.l., frt. alld. lb.	.70½	-
Sodium benzoate, USP, 50-lb. bgs., c.l., t.l., frt. alld. lb.	.83½	-
ton-lots, same basis lb.	.86½	-
100-lb. dms., c.l., t.l., same basis lb.	.89	-
ton-lots, same basis lb.	.92	-
Sodium bicarbonate, USP, powd., reg. grade, bgs., c.l., t.l., works, frt. equald. 100 lbs.	17.05	-
coarse, same basis 100 lbs.	18.05	-
fine, same basis 100 lbs.	17.20	-
gran., same basis 100 lbs.	17.85	-
gran., fine, same basis 100 lbs.	17.60	-
Sodium bichromate, gran., bgs. c.l., t.l., works, frt. equald. lb.	.57	-
Sodium bifluoride, 400-lb. dms., c.l., frt. equald. lb.	.78	-
100-lb. bgs., c.l., same basis lb.	.76	-
Sodium bisulfate, bulk, c.l., works ton	175.00	-
dms., c.l. 100 lbs.	13.00	-
Sodium bisulfite, anhyd. bgs., c.l., t.l., works, East 100 lbs.	28.50	-
works, West 100 lbs.	32.00	-
Sodium bisulfite, soln., 38%, bulk, 100% basis, works, East 100 lbs.	20.60	-
soln., 100%, bulk, works, West 100 lbs.	20.00	-
photographic grade, 43% soln., works 100 lbs.	21.90	-
Sodium borate NF, gran., bgs., c.l., works lb.	.51	-
powd., same basis lb.	.52	-
Sodium borohydride, powd., dms., 1000-5000 lbs. works lb.	19.88	21.90
Sodium borohydride, stabilized water soln., 12% $NaBH_4$, 100% basis, 3000 gal. tankwagon, works lb.	17.45	-
Sodium bromide, 99%, gran., 400-lb. dms., f.o.b. works lb.	1.04	-
Sodium carbonate, decahydrate, bgs. c.l., t.l., works ton.	264.00	-
Sodium carbonate, cryst. monohydrate (see Soda, ash)		
Sodium carbonate, monohydrated, bgs., c.l., t.l., works ton	392.00	-
Sodium carboxymethyl cellulose (see CMC.)		
Sodium chlorate, crystal, bulk, t.c., t.t., delivered, N.E. ton	330.00	-
delivered, S.E. ton	335.00	-
Sodium chlorate, cryst., 450-lb. dms., c.l., works E. lb.	.27	-
Sodium chloride, tech. (see Salt.)		
Sodium chloride, USP, gran., bgs. lb.	.29	-
Sodium chlorite, tech., dms., c.l., works lb.	1.17	1.27
Sodium chromate, anhyd., dms., c.l., t.l., works lb.	.67	-
Sodium chromate, tetrahydrate, bgs., c.l., t.l., works lb.	.64	-
Sodium citrate, gran., anhyd., 200-lb. dms., c.l., t.l., N.Y. lb.	1.95	-
Sodium citrate, USP, gran., dihydrate, 100-lb. bgs., t.l., f.o.b. shipping point lb.	.74½	-
Sodium cyanate, dms. 1,000-lb. lots, works lb.	.85	-
Sodium cyanide, briquettes or gran., 99% min., 200-lb. dms. min., divd. lb.	.71	-
Sodium diacetate, anhyd., dms., c.l., works lb.	.68	-
Sodium diacetate, FCC, 50-lb. bgs., t.l., divd. E. of Rockies lb.	.61	.67
Sodium diacetate, tech., 50-lb. dms., c.l., works lb.	.52	-
Sodium erythorbate, powd., gran., t.l. or mixed t.l., f.o.b. shipping point lb.	2.60	2.85
Prices W. of Denver 2c. per pound higher.		
Sodium ferrocyanide, bgs, t.l., works lb.	.60	-
Sodium fluoborate, tech., gran., dms., t.l., works, frt. equald. lb.	1.77	-
Sodium fluoride, white, 97%, 400-lb. dms., c.l., works, frt. equald. lb.	.6345	-
100 bgs., c.l., same basis lb.	.60	-
USP powd., 200-lb. dms., t.l., f.o.b. shipping point lb.	4.89	-
Sodium formate, bgs., c.l., works lb.	.20	-
Sodium gluconate, tech., 50-lb. bgs., 2,500 lbs. or more frt. alld. lb.	.60	-
Sodium hydride, oil dispersion, 60% NaH, 167-lb. dms., 10 dms., works lb.	1.86	-
Sodium hydrosulfide. (see Sodium sulfhydrate.)		
Sodium hydrosulfite, dms., c.l., t.l., f.o.b. shipping point E lb.	.64	-
Sodium hydroxide, USP, pellets, 100-lb. dms., c.l., t.l., works, frt. equald. lb.	.98	1.06
Sodium hydroxide, tech. (see Soda, caustic.)		
Sodium hypophosphite, EN grade, 300 lb. dms f.o.b. works lb.	1.425	1.50
110 lb. dms. lb.	1.47	1.52
Sodium hyposulfite (see Sodium thiosulfate).		
Sodium iodide, USP, cryst., 300- to 500-lb. lots. dms. frt. equald. lb.	14.72	-
Sodium lauryl sulfate, 30%, tanks, f.o.b. works lb.	.29	.32
Sodium lignin sulfonate, bgs., c.l., works 100 lbs.	25.50	-
Sodium metabisulfite (see Sodium bisulfite).		
Sodium metaborate, octahydrate, gran., bgs., c.l., works lb.	.38	-
tetrahydrate, gran, bgs, c.l., works lb.	.49	-
Sodium, metallic, 12-lb. bricks, dms., c.l. works lb.	.93	-
fused, dms. 24,000-lb. lots or more, works lb.	.67	-
tanks, works lb.	.70	.80
Sodium metaphosphate, tech. bgs., c.l., f.o.b. shipping pt. frt. equald 100 lbs.	61.50	-
food grade, bgs. c.l. f.o.b. frt. equald. 100 lbs.	68.25	-
Sodium metasilicate, anhyd., bgs., c.l. works 100 lbs.	27.25	-
bulk, c.l., works 100 lbs.	25.30	-
pentahydrate, bgs., c.l., f.o.b. shipping point 100 lbs.	18.95	-
bulk, c.l. works 100 lbs.	17.20	-
Sodium molybdate, anhyd., dms. f.o.b. works, 100 lbs and over lb.	4.87	-
cryst., dms., t.l., same basis lb.	4.12	-
Sodium naphthionate, dms., c.l., t.l., f.o.b. works lb.	2.00	-
Sodium Nitrate, USP, bgs., c.l., f.o.b., frt. equald. 100 lbs.	34.50	-
Sodium nitrate, dom., industrial, bgs., c.l., works ton	284.00	292.00
bulk, c.l., works ton	250.00	-
Imp., coml., 100-lb. bgs., c.l., Atl., or Gulf whse. ton	205.00	214.00
bulk, c.l., same basis ton	182.00	-
Imp., agricultural, bulk, c.l., same basis ton	140.00	-
Sodium nitrite, USP, dms., c.l., works, frt. equald. 100 lbs.	87.25	-
Sodium orthosilicate, tech., anhyd., bgs., c.l., works 100 lbs.	34.50	-
Sodium orthosilicate, tech., hydrated, flake, dms., c.l., works 100 lbs.	27.45	-
bgs., c.l., works 100 lbs.	26.25	-
Sodium oxalate, 99%, bgs., t.l., works lb.	.45	-
Sodium pentachlorophenate, beads c.l., 30,000-lb min. lb.	.67	-
bgs. lb.	.68	-
Sodium pentobarbital (see Pentobarbital-sodium).		
Sodium perborate, tetrahydrate, tech., bgs., c.l., t.l., works lb.	.32½	.36½
Sodium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant lb.	.63½	-
55-lb. bgs. same basis lb.	.62	-
Sodium phenobarbital (see Phenobarbital-Sodium).		
Sodium phenosulfonate, powd., dms. lb.	.76	-
Sodium phosphate, anhyd., dibasic tech., bgs., c.l., t.l., works, frt. equald. 100 lbs.	54.50	-
food grade, same basis 100 lbs.	57.50	-
Sodium phosphate, monobasic, tech., same basis 100 lbs.	55.75	-
food grade, same basis 100 lbs.	59.75	-
tribasic, tech., same basis 100 lbs.	52.25	52.75
food grade, same basis 100 lbs.	63.25	-
chlorinated, same basis 100 lbs.	31.50	-
cryst., tech., same basis 100 lbs.	30.50	-
cryst., food grade, same basis 100 lbs.	35.50	-
USP, dried, powd., bgs., dms., works lb.	.19	.20½
Sodium picramate, tech., paste, 200-lb. dms., dry basis, divd. lb.	5.50	-
Sodium propionate, dms., 2,000 lbs. or more, f.o.b. frt. alld. lb.	.54	-
Sodium pyrophosphate, acid, tech., bgs., c.l., works, frt. equald. 100 lbs.	58.25	-
food grade, non-leavening, bgs., c.l., works, frt. equald. 100 lbs.	61.25	-
Sodium pyrophosphate, ferric, dms., c.l., t.l., works lb.	.3880	-
Sodium pyrophosphate, tetrabasic, anhyd., tech., bgs., c.l., t.l., works, frt. equald. 100 lbs.	44.75	-
bulk, hopper cars, same basis 100 lbs.	42.50	-
food grade, bgs., c.l., t.l., same basis 100 lbs.	53.00	-
Sodium salicylate, USP, cryst., 200-lb. dms., 1,000-lb. lots or more, works, frt. equald. lb.	3.00	-
USP, powd., 200-lb. dms., 1,000-lb. lots or more, same basis lb.	3.05	-
Sodium sesquicarbonate, bulk, c.l., t.l., works ton.	170.00	-
bgs., c.l., t.l. works 100 lbs.	198.00	-
Sodium silicate, solid, or glass, 3.22-3.25 ratio, bulk, c.l., t.l., works 100 lbs.	15.70	-
bgs., c.l., t.l., works 100 lbs.	27.75	-
1.95-2.00 ratio, bulk, c.l., t.l., works 100 lbs.	20.30	-
bgs., c.l., t.l., works 100 lbs.	22.15	-
soln., 37.6° solid, 3.22-3.25 ratio, bulk, c.l., t.l., frt. equald 100 lb.	6.30	-
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of Na_2O		
Sodium silicofluoride, bgs., c.l., t.l., works, frt. equald. 100 lbs.	17.95	19.75
Sodium stannate, dms. wks frt ald. E. lb.	N.A	-
Sodium sulfanilate, dms, works lb.	22	-
Sodium sulfate, NF XII, powd., dms., 2,000-lb. lots lb.	.23½	-
tech., detergent, rayon-grade, c.l., works. Gulf ton	90.00	96.00
Sodium sulfate, West, bulk, c.l., works, frt. equald. ton	90.00	101.00
bulk, c.l. East, same basis ton	113.00	114.00
Sodium sulfate, photo grade, 100-lb. bgs., c.l., works ton	47.00	53.00
Sodium sulfhydrate, flake, 70-72%, dms., c.l., works, frt. equald. ton	500.00	-
liq., 44-46%, tanks, works, frt. equald. ton	500.00	-
Sodium sulfide, flake, dms., c.l., works, E., frt. equald. ton	470.00	-
bgs., same basis ton	410.00	-
Sodium sulfide, fused, dms., c.l., works, E., frt. equald. ton	240.00	-
Sodium sulfite, anhyd., tech. 95-100% bgs, f.o.b. works 100 lbs.	23.76	-
Sodium sulfocyanide CP (see Sodium thiocyanate).		
Sodium tetraborate (see Borax).		
Sodium tetrasulfide, liq. 34%, dms., c.l., works, frt. equald. ton	540.00	-
Sodium thiocyanate, purif., cryst., 250-lb. dms., 5 dms. or more f.o.b. works lb.	3.26	-
tech., anhyd. dms., 2,000 lbs. or more, works lb.	.97	-
Sodium thiosulfate, tech., photo-grade, anhyd., 100-lb. bgs., c.l., t.l., works, frt. equald. 100 lbs.	45.50	-
cryst. pentahydrate, c.l., t.l., same basis 100 lbs.	28.50	-
Sodium titanate, dms., c.l., works lb.	.14¼	-
Sodium trichloroacetate, 95%, 50-lb. bgs., c.l., frt. alld. E. lb.	.28	-
Sodium tripolyphosphate, tech., bgs., c.l., t.l., works, frt. equald. 100 lbs.	39.75	-
bulk, hopper cars, same basis 100 lbs.	37.50	-
food grade, bgs., c.l., t.l., same basis 100 lbs.	48.50	-
Sodium tungstate, tech. high moly., dms., 10,800 lbs. or more, frt. alld. lb.	5.00	5.50
Folin grade dms., 10,800 lbs. or more, same basis lb.	8.00	-
Sodium-ammonium phosphate, purif., cryst., dms., works lb.	.62	-
Sodium-formaldehyde sulfoxylate, dms., t.l., f.o.b. works lb.	.91	-
Sodium-zirconyl sulfate, dms., 1,000-lb. lots or more, works lb.	.28	-
tech., dms., any quantity, works lb.	.16	-
Solvent naphtha, petroleum, straight aromatic, b.r. 320°-350°F, 56°F m.a.p., tanks:		
New Jersey gal.	1.52	-
Houston gal.	1.41	-
Illinois gal.	1.54	-
Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.a.p., tanks:		
New Jersey gal.	1.30	1.35
Houston gal.	1.30	-
Illinois gal.	1.30	1.35
Sorbic acid, t.l. dms., divd. lb.	2.60	3.10

CHEMICAL PRICES

WEEK ENDING DEC. 12, 1986

Sorbitan monostearate, dms., c.l., t.l., 30,000 lb. min., f.o.b. works lb.	.76	-
Sorbitan tristearate, c.l., t.l., 30,000 lb. min., f.o.b. works lb.	.80	-
Sorbitol, USP, reg. 70% aqueous, dms., c.l., f.o.b. shipping point lb.	.35	-
tanks, f.o.b. shipping point lb.	.30	-
gran., dms., c.l. t.l., works lb.	.70	.74
powd., dms., c.l., t.l., works lb.	.68	.72
Soybean meal (See Oils, Fats & Waxes market report.)		
Soybean oil (See Oils, Fats & Waxes market report.)		
Soybean oil acidulated, soapstock, 95% acid, tanks, New York lb.	.14	.15
Soybean oil, acid, dbl., dist., dms. lb.	.48	.59
tanks lb.	.43	.44
s.d., dms lb.	.47	.58
tanks lb.	.38	.43
Spearmint leaves, imp., bls. lb.	2.50	2.70
Spearmint oil, Far West, native lb.	9.50	-
Chinese, 60% lb.	5.60	-
Chinese, 80%	8.00	-
Far West, Scotch lb.	18.50	-
Spruce oil, dms lb.	8.00	-
St. John's bread, edible, bls. lb.	.29	.30
Stannic chloride, anhyd., dms., works lb.	N.A.	-
Stannic oxide, dms., works lb.	N.A.	-
Stannous chloride, anhyd., dms. wks lb.	N.A.	-
Stannous fluoborate, liq., conc., dms., t.l., works, frt. equald. lb.	2.50	-
Stannous oxide, dms., works lb.	N.A.	-
Stannous sulfate, dms., works lb.	N.A.	-
Stearic acid, double pressed, bulk lb.	.26	.39
single-pressed, bulk lb.	.28	.375
triple-pressed, bulk lb.	.32	.40
Stramonium leaves, bgs. lb.	.15	.20
Streptomycin sulfate, USP, bulk kilo	47.00	-
Strontium carbonate, glass grd., bgs., t.l., works lb.	.37¼	-
Strontium nitrate, 50-15 bgs., c.l., works 100 lbs.	51.50	-
Styrene monomer, 99.8% min., t.c., t.t., f.o.b. works lb.	.23	.27
Styrene-acrylonitrile resin, nat., bulk, f.o.b. plant lb.	.77	-
cryst., bulk, same basis lb	.77	.81
clear, same basis lb.	.77	.81
Styrol acetate, dms. lb.	2.35	-
Succinic acid, purif., cryst., dms., t.l., frt. alld. lb.	2.00	2.10
Succinic anhydride, dms., c.l., t.l., f.o.b work lb.	1.71	-
Sucrose, refd., white, bgs., c.l., f.o.b. refy E. 100 lbs.	33.10	-
Sucrose acetate, isobutyrate, 90%, dms., t.l., divd. lb.	1.18	-
tanks, divd. lb	1.10	-
100%, dms., t.l., divd. lb.	1.18	-
Sucrose octa-acetate, denaturing grade, 100-lb dms., f.o.b. works kilo	12.50	13.50
Sulfabenzamide, dms., 500 kilos kilo	39.50	-
Sulfabenzamide-sodium, dms., 500 kilos kilo	25.00	-
Sulfacetamide, USP, dms., 500 kilos kilo	20.00	23.50
Sulfadiazine, USP, powd. dms., 500 kilos kilo	53.00	-
Sulfadiazine-sodium, USP, dms., 500 kilos kilo	40.70	-
Sulfamerazine, USP, microcrystals, dms., 500 kilos kilo	33.50	-
USP, powd., dms., 500 kilos kilo	32.00	-
Sulfamethazine-sodium, USP, powd. dms., 50 kilos kilo	13.00	-
Sulfamethazine, powder, dms., 500 kilos kilo	9.00	10.00
Sulfamic acid, cryst., bgs., c.l., t.l., works 100 lbs.	38.00	41.00
Sulfamic acid, gran., dms., c.l., t.l., works lb.	.36	-
Sulfanilamide, NF, reg. 1,000-lb. dms., frt. equald. lb.	2.00	-
Sulfanilic acid, tech., bgs., t.l., f.o.b. works lb.	.67½	-
Sulfaquinoxaline, veterinary, grade, dms. lb.	8.00	-
Sulfur, crude, bright, molten, dom., f.o.b. vessels, Gulfports long-ton	118.00	120.00
f.o.b. La. refy long-ton	120.00	122.00
recovered, divd., Houston long-ton	120.00	122.00
ex terminal, Rotterdam long ton	135.00	-
f.o.b. tanks, Alberta, Canada, for US delivery long-ton	80.00	85.00
dark, ex-Tampa, Fla. long-ton	152.50	-
Tampa price subject to $10 per long-ton discount for most customers.		
Sulfur, crude, 99.5% min. purity, coml. flour, 50-lb. bgs., c.l., mines basis 100 lbs.	13.60	-
lump, same basis 100 lbs.	13.60	-
Sulfur, refd., 99.5% min. purity, rolls 50-lb. bags, c.l., mines basis 100 lbs.	17.50	-
flour, light, 50-lb. bgs., same basis 100 lbs.	20.00	-
Sulfur, refd., sublimed, NF, 99.65% min. purity, 50-lb. bgs., c.l. mines basis 100 lbs.	26.00	-
Sulfur, rubbermakers, 99.5% min. purity, coml., reg., 50-lb. bgs., c.l., mines basis 100 lbs.	14.60	-
fine, 98% min. passing through 325 mesh, same basis 100 lbs.	15.60	-
Sulfur dichloride, dms., c.l., works, frt. equald. lb.	.24	-
tanks, same basis lb.	.17¾	-
Sulfur dioxide, liq., bulk, t.c., t.t., f.o.b. works ton	230.00	-
Sulfur monochloride, dms., c.l., works, frt. equald lb.	.22½	-
tanks, same basis lb.	.16¾	-

CHEMICAL PRICES

WEEK ENDING DEC. 12, 1986

Sulfuric acid, virgin 100% tanks, works,		
East Coast ... ton	71.75	95.90
Gulf Coast ... ton	75.00	86.40
Midwest ... ton	80.25	-
Southeast ... ton	68.15	-
West Coast ... ton	85.00	-

NOTE: For prices on 60 and 66 Be., multiply by .7767 and .9319, respectively. For price of 20% fuming oleum, as is, add $3-$4 to above prices and multiply by 1.045.

Sulfuric acid, smelter, 100% tanks, works,		
Gulf Coast ... ton	48.00	52.00
New Mexico ... ton	20.00	25.00
Southeast ... ton	63.15	-
93%, tanks, divd., Northwest ton	60.00	65.00
Sunflowerseed oil, crude, f.o.b. Minneapolis ... lb.	.14½	.15
Superphosphate, triple, 48% or more, a.p.a., run-of-pile, bulk, c.l., Fla ... unit-ton	2.75	3.05
bulk, gran., c.l., Fla. ... ton	160.00	165.00

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Talc, dom., grd. New York bgs., c.l., works ... ton	84.00	-
99.5%, 325 mesh, bgs., c.l., works ... ton	84.00	90.00
Talc, dom., 99.5%, 400 mesh, micronized, bgs., c.l., works ... ton	167.00	238.00
625 mesh, micronized, bgs., c.l., works ... ton	200.00	-
dom., ord., Calif. grd., bgs., c.l., works ... ton	90.00	-
ord., Vermont, off-color grd., bgs., c.l., works ... ton	136.00	-
imp., Canadian, grd., bgs., c.l., works ... ton	70.00	84.00
Tall oil, crude, Southeast, tanks, works, frt. equald. ... ton	90.00	100.00
Tall oil, refd., acid, same basis ... lb.	.31	-
dist., tanks, same basis ... lb.	.19	.23
Tall oil acids, 2% or more rosin, tanks, works, frt. equald. ... lb.	.20½	.23½
less than 2% rosin acid ... lb.	.22	.27
Tallow (see Oils, Fats & Waxes market report.)		
Tallow, fatty acids, tech., non-ret. dms., c.l., divd. ... lb.	.37	.40
tanks, divd ... lb.	.29	.45
hydrogenated, tech., flake, bgs., c.l. divd. ... lb.	.37	.33
tanks, divd. ... lb.	.35	.42
Tangerine oil, Fla., dms. f.o.b. ... lb.	8.50	9.50
Italian, dms. ... kilo	52.90	-
Tankage, animal feeding, 9-11% NH_3, New York, bulk ... unit-ton	5.50	-
Tankage, fert. grade (see Nitrogenous process tankage).		
Tannic acid, NF, fluffy, bbls., 1,000-lb. lots ... lb.	6.09	-
tech., powd., dms ... lb.	4.62	-
Tar acid oil, 15-16% t.l., dms., f.o.b works ... gal.	1.40	-
25-28%, t.l., dms., f.o.b. works ... gal.	1.59	-
50-53%, t.l., dms., f.o.b. works ... gal.	1.87	-
Tartaric acid, NF, bgs. ... lb.	1.20	1.50
Tellurium, metallurgical, f.o.b. works lb.	12.00	-
Terpin hydrate, NF, imp., cryst., powd., 36 kilo drums, f.o.b. ship. pt., frt. equald ... lb.	1.35	-
Terpineol ... lb.	1.10	1.50
Terpinyl acetate, extra, dms ... lb.	2.40	-
prime, dms. ... lb.	1.35	2.05
Terpinyl propionate, dms. ... lb.	4.50	-
Tetrachloroethylene, tech (see Perchloroethylene).		
Tetrachloroethylene, USP, dms., c.l., t.l. works ... lb.	.30¼	-
Tetraethyl orthosilicate, bulk, f.o.b. works ... lb.	1.53	1.66
Tetraethylene glycol, tanks, frt. alld. lb.	.67	-
Tetraethylene glycol diacrylate, t.l. dms., f.o.b. works ... lb.	1.50	-
Tetraethylenepentamine, tanks, same basis ... lb.	1.70	1.75
Tetraethylthiuram disulfide, tech., flake, dms., t.l., frt. alld. ... lb.	.68	2.07
Tetrahydrofuran dms., c.l., t.l., f.o.b. works ... lb.	1.02	-
tanks, same basis ... lb.	.98	-
Tetrahydrofurfuryl alcohol tanks, f.o.b. Memphis, Tenn. ... lb.	.90	-
Tetrahydrolinalool, syn., dms. ... lb.	7.20	-
Tetrahydrophthalic anhydride dms., c.l., t.l. f.o.b. works ... lb.	.65	-
Tetrapotassium phosphate (see Potassium phosphate, tetrabasic).		
Tetrasodium pyrophosphate (see Sodium pyrophosphate, tetrabasic.)		
Thallium metal, divd. ... lb.	35.00	-
Thallium sulfate, 99%, bots., divd. kilo	140.00	-
Theobromine, bulk f.o.b. works .. kilo	140.00	150.00
Theophylline, USP, anhyd. 50-kilo dms., 10,000-kilo lots ... kilo	12.00	12.95
Thiamine hydrochloride, USP 100-kilo dms., divd. ... kilo.	33.00	-
Thiamine mononitrate, USP, 100-kilo., dms., divd. ... kilo.	33.00	-
Thiodiphenol, 98%, dms., f.o.b. works ... lb.	3.35	-
Thioflavin green toners, molybdated, PMA, dms. ... lb.	5.40	6.05
tungstated, PTA, dms. ... lb.	5.60	5.85
Thioglycolic acid, refd., dms., ton lots 100% acid basis ... lb.	2.07	-
Thioindigoid maroon, dms., frt. alld. lb.	7.50	-
reds, dms., frt. alld. ... lb.	5.88	6.12
Thionyl chloride, high-purity, 99.6%, 24,000-lb. min. t.l., dms. frt. equald ... lb.	.55	-
Thorium nitrate, purif., dms., 100-lb. lots or more, works ... lb.	2.75	-
dl-Threonine, dms 10 kilos wks ... kilo.	128.00	-
Thyme leaves, French, bgs. ... lb.	1.45	-
Spanish, bgs. ... lb.	.75	-
Thyme oil, NF, red, dms. ... kilo	20.00	-
NF, white, dms. ... kilo	22.00	-
Thymol, NF ... lb.	3.75	6.15
Thymol iodide, dms., 100-lbs. f.o.b. works ... lb.	52.30	56.20
Tin metal (NY composite) ... lb.	N.A.	-
Titanium dioxide, anatase, bgs., 20-ton lots, frt. alld. ... lb.	.77	.79
slurry shipments, 50-ton lots, dry basis, frt. alld. ... lb.	.78	-
Titanium dioxide, rutile, reg., bgs., 20-ton lots, frt. alld ... lb.	.81	.84
slurry shipments, 50 ton lots, dry basis, frt. alld. ... lb.	.84	-
Non-chalking rutile material costs 1c. per pound more.		
Titanium hydride powd. electronics *grade, dms.* ... lb.	26.50	-
Titanium tetrachloride, tech., bulk, c.l., f.o.b. works ... lb.	.30	.35
200-gal cylinders c.l., same basis lb.	.50	-
Titanium sponge, 99.3%, fiber drums, less than 5,000 lbs. f.o.b. wks. ... lb.	4.65	-
Tobias acid, 2,000 lbs. or more ... lb.	2.45	-
d-a-Tocopherols, 67%, dms. ... kilo	50.08	-
d-a-Tocopheryl acetate, 81% conc., dms. ... kilo	57.49	-
d-a-Tocopheryl acid succinate, cryst., dms. ... kilo	78.44	-
dl-a-Tocopherol, dms. ... kilo.	27.40	-
dl-a-Tocopheryl acetate, USP 50-kilo dm. 1000 kilo min. ... kilo.	16.00	18.50
50% dry powd., 50-kilo dm. ... kilo	17.00	-
Tolu balsam, cns. ... lb.	7.60	8.68
Toluene, petroleum, ind. or nitration, tanks		
Atlanta, Ga., divd. ... gal.	.70	-
Bayonne, N.J., divd. ... gal.	.70	-
Baytown, Tex., f.o.b. ... gal.	.70	-
Chicago, Ill. divd. ... gal.	.70	-
Clairton, Pa., f.o.b. ... gal.	.70	-
Deer Park, Tex., f.o.b. ... gal.	.70	-
Ft. Wayne, Ind., divd. ... gal.	.70	-
Gulf Coast, spot, barges .. gal.	.69	.70
Houston, Tex., divd. ... gal.	.70	-
New Jersey Metro, divd ... gal.	.70	-
Philadelphia, Pa., divd. ... gal.	.70	-
Providence, R.I., divd. ... gal.	.70	-
Toluene di-isocyanate (mixed isomers), 80%, 2,4- and 20% 2,6- isomers, jumbo tankcars, divd. ... lb.	1.01	-
p-Toluenesulfonamide, powd., dms., t.l., works ... lb.	3.55	-
m-Toluidine, tech., bulk ... lb.	3.10	-
o-Toluidine, tech., liq., dms. c.l. ... lb.	.72	.75
bulk, same basis ... lb.	.80	.84
p-Toluidine, tech. cast solid, dms., cl., works ... lb.	1.80	1.85
Liq., tanks, same basis ... lb.	1.70	-
flake, same basis ... lb.	1.95	-
Toluidines, mixed, o-m-p, tech., liquid, c.l. f.o.b. works ... lb.	1.03	-
bulk same basis ... lb.	.95	-
Tolyltriazole, dms., 1,000-lb. lots, f.o.b. Cincinnati, Ohio ... lb.	2.90	-
Tonka beans, Angostura, prime, 1,000-lb. lots ... lb.	6.50	-
Toxaphene, dms., c.l., t.l., works .. lb.	.38	-
Tragacanth gum, No. 1, ribbons, cns. lb.	36.00	40.00
flaked powder ... lb.	12.50	15.00
Triacetin tanks, divd. E ... lb.	.75	-
Tributyl citrate, t.l., drums, f.o.b., works ... lb.	1.70	-
Tributyl phosphate, tanks, works .. lb.	1.65	1.77
Tributylamine, dms., c.l., divd. ... lb.	1.39	-
tanks, same basis ... lb.	1.33	-
Trichloroacetic acid, tech., 300-lb. dms., c.l., f.o.b., works ... lb.	.94	-
USP, 100-lb. dms., frt. equald. .. lb.	.99½	-
1,2,4-Trichlorobenzene, pure, tanks, divd ... lb.	.61½	-
1,1,1-Trichloroethane, tanks, consumers, divd. ... lb.	.40½	-
1,1,2-Trichloroethane, tanks, f.o.b. works ... lb.	.42	-
Trichloroethylene, tanks, divd. ... lb.	.38½	-
Trichloroisocyanuric acid, dms. ... lb.	1.25	-
Trichlorophenoxyacetic acid (see 2,4,5-T).		
Tricholine citrate, 65%, soln., non-ret. dms., 1,500-lb. lots, divd. .. lb.	1.35	-
Tricresyl phosphate, tanks, f.o.b. works ... lb.	1.60	1.76
Tridecyl alcohol, mixed isomers, tanks, divd. ... lb.	.57	-
Triethanolamine, 85%, tanks, divd. E. .. lb.	.35	.37
99%, tanks, same basis ... lb.	.35	.37
Triethanolamine lauryl sulfate, tanks, f.o.b. works ... lb.	.27¼	.27½
Triethylamine, dms., c.l., divd ... lb.	1.33	-
tanks, same basis ... lb.	1.20	-
Triethyl citrate, t.l., drums, f.o.b., works ... lb.	1.82	-
Triethyl phosphate, tanks, divd. ... lb.	1.16	-
Triethylene glycol, tanks, f.o.b. Gulf lb.	.47	-
Triethylene glycol dipelargonate, tanks f.o.b. works ... lb.	.29½	-
40-60% tanks, 100% basis, frt. equald. ... lb.	.35	-
Triethylenetetramine tanks, frt. equald. lb.	*1.43*	*1.45*
Tri-iso-tolyl trimellitate, f.o.b. works lb.	.51	.55
Tri-isobutylene, tanks, divd. ... lb.	.45	-
Tri-isopropanolamine, dms., c.l., frt. alld. E. ... lb.	.57½	-
Trimethylamine, anhyd., tanks, frt. equald., 100% ... lb.	.54½	-
25% soln., tanks, frt. equald., 100% basis ... lb.	.63½	-
40% soln., tanks, frt. equald., 100% basis ... lb.	.56½	.57
Trimethylolpropane bgs c.l. t.l. divd. lb.	.73	-
Trimethylolpropane triacrylate, t.l. dms., f.o.b. works ... lb.	1.60	-
Tripentaerythritol, tanks, frt. alld., E. lb.	1.00	-
Triphenyl phosphate, dms., t.l., frt. equald ... lb.	1.64	.78
Tripropylene glycol tanks, f.o.b. ... lb.	.64	.66
Tris-(hydromethyl)-nitromethane, solid, t.l. works ... lb.	.605	-
Trisodium phosphate (see Sodium phosphate, tribasic)		
l-Tryptophan, dms, 25-kilo lots ... kilo	62.00	65.00
Tung oil, tanks, imp. New York ... lb.	.31	.33
*Tungstic acid 92½%, dms., 1,750-*6,000 lbs., works ... lb.	12.85	-
Turmeric, Alleppey 5% ... lb.	.63	-
Turmeric, Alleppey over 6% ... lb.	.67	-
Turpentine, crude sulfate tanks, f.o.b. Southeast works ... gal.	.90	1.00

U

Ultramarine blue pigments, 550-2,000 lb.-lots, works ... lb.	1.30	-
violet, same basis ... lb.	2.20	-
Umber pigment, burnt, American, frt. equald. ... lb.	.13½	.15½
raw, American, dom., bgs., l.c.l., same basis ... lb.	.13½	.14¾
Undecylenic acid, dms., works ... lb.	2.70	-
Urea, 46% N, ind., bulk, Gulf Coast, 50-ton c.l. ... ton	200.00	-
46% N, agricultural, barges, f.o.b. Gulf Coast, granular ... ton	75.00	80.00
46% N, agricultural, f.o.b. Midwest terminals, granular ... ton	100.00	-
Uva-Ursi leaves, bls. ... lb.	.22	-

V

Valerian root, Belgian, bgs. ... lb.	.65	.85
Indian, bgs. ... lb.	.45	-
Vanadium oxytrichloride, 3,000 lb. cyls., works ... lb.	5.40	-
Vanadium pentoxide, tech., gran., per lb. of V_2O_5, 550-lb. dms., works. . lb.	4.10	4.94
fused or flake, per lb. V_2O_5, 550-lb. dms., works ... lb.	3.35	3.65
Vandyke brown, bags., t.l., frt. equald. lb.	.27¼	-
Vanilla beans, Madagascar ... lb.	37.00	-
Java, tins ... lb.	27.00	30.00
Vanillin, USP, dms., f.o.b works ... lb.	6.25	-
imp., dms. ... lb.	4.75	5.00
Versinol Ag ... lb.	.64	-
Vetiveryl acetate, dms. ... kilo	60.50	-
extra ... kilo	63.00	-
Vetiver oil, Bourbon, dms. ... lb.	49.00	-
Chinese ... lb.	18.00	-
Haitian ... lb.	26.50	-
Java ... kilo	34.00	-
Victoria blue toners, molybdated, PMA *dms.* ... lb.	8.20	8.30
tungstated, PTA, dms. ... lb.	10.40	-
Vinyl acetate monomer, tanks, divd. lb.	.39	-
Vinyl chloride monomer, polymer grade, tanks, f.o.b. works.. lb.	.28	-
Vinyl ether, USP, anesthesia. 75-cc. bots., hospitals ... bots.	1.56	-
2-Vinylpyridine t.l., dms. works. ..kilo.	7.81	-
tanks, works ... kilo.	7.61	-
Vinyltoluene, bulk, f.o.b. ... lb.	.67	.73½
Vitamin A, synthetic, dry, pharm., 500,000 A units per gm., 50-kilo. lots, kilo	33.00	-
Vitamin A, liq. in oil, pharm., 1,000,000 A units per gram, 10 kilo lots. , kilo	41.00	-
Vitamin A. feed grade, 650,000 units per gm. ... kilo.	18.70	23.85
Vitamin B_1 (see Thiamine hydrochloride).		
Vitamin B_{12} (see Riboflavin and Yeast).		
Vitamin B_{12}, cryst., non-sterile, USP (cyanocobalamin), vials, 50-gram, lots. ... gram	8.00	9.75
Vitamin B_{12} 1% trituration of cryst. B_{12} (cyanocobalamin USP) with dicalcium phosphate, 25-kilo dms. kilo.	10.75	12.75
Vitamin B_{12}, 0.1% trituration of cryst. B_{12} (cyanocobalamin USP) with mannitol, 25-kilo. dms. ... kilo.	15.80	-
Vitamin B_{12}, cobalamin concentrate NF with mannitol. 1,000 mcg, per gram, dms, ... per gram activity	19.45	-
Vitamin B_{12}, 1% Vitamin B_{12}, USP, absorbed on resin, 5-kilo dms., 500-gram lots, frt. alld. per gram activity	15.85	-
Vitamin B_{12}, 1% cobalamin concentrate, NF, absorbed on resin, 5-kilo *dms., frt. alld. per gram activity.*	15.40	-
Vitamin B_{12}, 1% cyanocobalamin in gelatin, 2.5-kilo dms., frt. alld. ... per gram activity	15.40	-
Vitamin C (see Ascorbic acid).		
Vitamin D (see Cholecalciferol)		
Vitamin D_2 (see Codliver and Fishliver oils).		
Vitamin E (see a-Tocopherol and Wheat germ oil).		
Vitamin H (see Biotin).		
Violet methyl toner (see Methyl violet toner)		

W

Warfarin 0.5%, dms., ton lots, frt. alld. New York or Chicago ... lb.	.75	-
Wheat germ oil, cold-pressed, ... gal.	16.50	17.50
cold-processed ... gal.	14.00	-
White precipitate, USP, powd., 100-lb. dms., f.o.b. works ... lb.	7.892	11.24
Whiting (see Calcium carbonate).		
Wintergreen oil, syn. (see Methyl salicylate).		
Witch hazel bark, bls. ... lb.	1.35	-
leaves, bls. ... lb.	1.75	-
400 mesh, bgs., c.l. works ... ton	134.00	-
325 mesh, bgs., c.l. works ... ton	117.00	-
high aspect ratio, bgs., works ton	164.00	-
Wollastonite, t.l., f.o.b., producing plant. general grade ... ton	200.00	-
325 mesh ... ton	140.00	141.00
400 mesh ... ton	160.00	-
1250 mesh ... ton	500.00	-
Wool grease, USP (see Lanolin).		
Wormseed oil (see Chenopodium oil, NF)		
Wormwood oil, cns. ... lb.	31.00	-

X

Xanthan gum, food 300-lb. dms., f.o.b. works ... lb.	5.65	6.20
ind., grade, same basis ... lb.	4.54	-
Xylene, petroleum, ind. or nitration, tanks		
Alliance, La., f.o.b. ... gal.	.76½	-
Atlanta, Ga., divd ... gal.	.76½	-
Bayonne, N.J., divd ... gal.	.76½	-
Bayonne, N.J f.o.b. ... gal.	.76½	-
Baytown, Tex., f.o.b. ... gal.	.76½	-
Chicago, Ill., divd ... gal.	.76½	-
Clairton, Pa. ... gal.	.76½	-
Ft. Wayne, Ind., divd ... gal.	.76½	-
Gulf Coast, spot, barges .. gal.	.76½	.80
Houston, Tex., divd ... gal.	.75½	-
New Jersey Metro, divd ... gal.	.76½	-
Xylene, petroleum, ind. or nitration, tanks		
Philadelphia, Pa., divd ... gal.	1.38	-
Providence, R.I., divd ... gal.	1.42	-
South Bend, Ind., divd ... gal.	1.37	-
m-Xylene, high purity, tanks, f.o.b. Texas City, Tex. ... lb.	.38	-
o-Xylene, tanks, works ... lb.	.13¾	-
p-Xylene, tanks, divd. ... lb.	.19	-
m-Xylenediamine, dms., t.l., f.o.b. works ... lb.	1.70	-
2,4-Xylidine, tech., liq., c.l., t.l. f.o.b. works ... lb.	1.50	-
Xylidines, mixed, o-m-p., dms., c.l., t.l., f.o.b. works ... lb.	1.00	-

Y

Yara yara, 25-lb. cns. ... lb.	2.81	-
Yeast, pure brewer's debittered, NF, Saccharomyces, t.l., f.o.b. works . lb.	1.10	-
Yerba, santa leaves, bls. ... lb.	2.40	-
extra, bots. ... lb.	26.50	31.75
Ylang-ylang oil, extra grade ... lb.	36.50	-
grade 1 ... lb.	25.00	-
grade 2 ... lb.	25.00	-
grade 3 ... lb.	22.00	-

Z

Zein, bgs., 2,000-lb. lots ... lb.	7.60	9.30
Zinc acetate, NF, dms. ... lb.	1.00	1.78
tech., dihydrate, bgs., t.l., works. lb.	1.60	-
Zinc borate, tech., 43% ZnO, 37% B_2O_3, 50-lb. bgs., 20,000-lb. t.l., f.o.b. works ... lb.	.65	-
cryst., 37% ZnO, 49% B_2O_3, 250-lb. dms. 20,000 lbs. t.l. f.o.b. wks. lb	.89	-
Zinc chloride, USP, gran., dms. ... kilo	9.79	-
Zinc chloride, tech., soln. 50%, tanks. f.o.b. Cleveland, Ohio ... 100 lbs.	20.20	-
Concord, N.C. ... 100 lbs.	20.20	-
Freeport, Tex. ... 100 lbs.	20.20	-
Old Bridge, N.J. ... 100 lbs.	20.20	-
65 degree, same basis Cleveland, Ohio ... 100 lbs.	27.90	-
Concord, N.C. ... 100 lbs.	27.90	-
Old Bridge, N.J. ... 100 lbs.	27.90	-
70 degree, same basis Cleveland, Ohio ... 100 lbs.	29.70	-
Concord, NC ... 100 lbs.	29.70	-
Old Bridge, NJ ... 100 lbs.	29.70	-
72 degree, same basis Cleveland, Ohio ... 100 lbs.	33.20	-
Concord, NC ... 100 lbs.	33.20	-
Old Bridge, NJ ... 100 lbs.	33.20	-
Zinc chromate, bgs., divd. ... lb.	1.12	-
Zinc cyanide, dms., c.l. ... lb.	1.65	2.14
Zinc dust pigment type 1 & 2, dms., c.l., f.o.b. plant ... lb	.59	.67
Zinc ethylenediamine tetracetic acid, 8.4% Zn., ammonia salt soln., t.c., t.t., f.o.b. works ... lb.	.56	-
9% Zn., ammonia salt soln., t.c., t.t., f.o.b. works ... lb.	.48	-
Zinc fluoborate, liq. conc., dms., t.l., works, frt. equald. ... lb.	.66	-
Zinc metal, high grade, divd. ... lb.	.47	.50
Zinc naphthenate, liq. 8% Zn, dms., divd ... lb.	.95	-
Zinc nitrate, tech., flake 300-lb. dms. . lb.	.34	.36
Zinc oxide photo conductive, bgs., c.l., frt. alld. ... lb.	.50	.60
Zinc oxide, USP 50-lb. bxs., c.l., frt. alld. ... lb.	.59	.65
Zinc oxide pigment, American process, lead-free bgs., c.l., frt. alld. ... lb.	.57	.59
Zinc oxide pigment, French process *regular*, bgs., c.l., frt. alld. ... lb.	.55	.58½
Zinc phenolsulfonate, purif., gran., 250-lb. dms., t.l., frt. alld. ... lb.	1.82	-
Zinc pyridinethione, 48% dispersion, dms., f.o.b. works ... lb.	8.50	8.80
Industrial grade ...	14.50	-
Zinc resinate precip. 7.2-7.6% Zn. dms., frt. alld. ... lb.	.45	-
Zinc silicofluoride, dms., c.l., t.l., works ... lb.	.17	.2850
Zinc stearate, USP, bulk, t.l. ... lb.	.92	1.08
Zinc sulfate, gran., monohydrate, industrial grade 36% Zn., bgs., c.l., works ... 100 lbs.	30.00	32.00
agricultural grade powd., bulk, same basis ... 100 lbs.	26.50	-
Zinc yellow (see Zinc chromate).		
Zinc-ammonium chloride, bgs., c.l., works ... lb.	.42	-
Zinc undecylenate, dms., works. .. lb.	4.67	4.70
Zinc-formaldehyde sulfoxylate, basic 200-lb. dms., frt. alld. ... lb.	1.05	-
Zircon gran. bgs., bulk c.l., works. ton	165.00	177.00
Zircon milled bgs., 200 and 325 mesh, c.l., works ... ton	225.00	-
Zirconium acetate soln., 25% ZrO_2, dms., c.l., 30,000 lbs. min., works. .. lb.	.97	-
22% ZrO_2, same basis ... lb.	.78	-
Zirconium hydride, powd., electronic grade, dms., works ... lb.	.91	.75
Zirconium oxide, powd., coml., dms., 2,000 lbs. min. ... lb.	4.26	-
electronic, same basis ... lb.	7.25	-
insulating, stabilized, 325°F same basis ... lb.	3.31	3.82
insulating, unstabilized, 325°F same basis ... lb.	3.55	3.75
dense, stabilized, 30F, same basis . lb.	2.82	-
Zirconium oxychloride, liq., cns. 5-ton lots, works, ... lb.	.91	1.04

CHEMICAL IMPORTS

US imports of chemicals and related materials are reported in this section by CPI material. Listings include consignee where possible, container, net weight, name of vessel (in parenthesis), port of origin and date of shipment's arrival in New York or the Port of Newark.

US chemical imports/exports are tabulated monthly in the market reports.

A-B

ACETOACETANILIDE Uniroyal 1360 bgs (75857 lbs) (Chao He) Hsinkang, 11/6.
ACETYLSALICYLIC ACID Mobay Chemical 30 plt (42229 lbs) (Liberty) Valencia, 11/11.
ACID ORANGE China Interocean Transport 280 dms (18519 lbs) (Xiang He) Shanghai, 11/6.
ACRYLAMIDE Mitrans 480 bgs (27701 lbs) (Ming Ocean) Kobe, 11/6.
ACRYLAMIDE Pluess Stauffer 16 plt (27690 lbs) (Xiang He) Kobe, 11/6.
ACRYLIC METHACRYLIC ACID RESIN Mobil 80 dms (40036 lbs) (Ming Ocean) Yokohama, 11/6.
ACRYLOID BTA SYNTHETIC RESIN Rohm & Haas 960 pcs (44445 lbs) (Sea Land Voyager) Bremerhaven, 11/5.
ACRYLONITRILE BUTADIENE RUBBER Alba Fwdg 486 bls (40040 lbs) (Nedlloyd Clement) Kobe, 11/5.
ACRYLONITRILE STYRENE COPOLYMER Standard Polymers 900 bgs (50000 lbs) (Ever Gleamy) Kaohsiung, 11/6.
ACTIVATED CARBON Degussa 800 bgs (35803 lbs) (Nurnberg Express) Bremerhaven, 11/5.
AGAR AGAR American Shpg 172 bgs (9934 lbs) (Copiapo) Valparaiso, 11/12.
Eum Line 82 ctn (0 lbs) (Xiang He) Yong Kong, 11/6.
Harold Pepper 40 dms (4850 lbs) (Ever Gleamy) Osaka, 11/6.
Kishimoto Trdg 2 ctn (31 lbs) (Xiang He) Kobe, 11/6.
ALBANIAN SAGE Louis Furth 1871 bls (168773 lbs) (Carmen Carina) Rijeka, 11/7.
1128 bls (126324 lbs) (Hreljin) Rijeka, 11/8.
ALKYDAMINES 1 tnk (40080 lbs) (Ever Genius) Antwerp, 11/5.
ALUMINUM OXIDE CORUNDUM Treibacher 388 bgs (38804 lbs) (Nurnberg Express) Bremerhaven, 11/5.
ALUMINUM PASTE Landers Segal Color 248 dms (39376 lbs) (JEbel Ali) Leghorn, 11/11.
ALUMINUM PASTE TP SCAC Transport 191 dms (45476 lbs) (Husum) Hamburg, 11/7.
AMMONIUM CUYMOL FOMAT RESIN Rohm Technology 25 dms (7185 lbs) (Ever Genius) Antwerp, 11/5.
AMMONIUM PERSULFATE Mitsubishi Intl 1280 bgs (71384 lbs) (Ming Ocean) Yokohama, 11/6.
AMYRIS OIL *Polarome Mfg 10 dms (4892 lbs) (St Louis)* Haina, 11/16.
ANHYDRIDE SUCCINIQUE Rhone Poulenc 200 bgs (11464 lbs) (Freedom Ms) Fos, 11/4.
ANTIMONY REGULUS Chi Mei Metals 240 cs (57565 lbs) (Xiang He) Wuhan, 11/6.
Minmetals 531 cs (117287 lbs) (Xiang He) Shanghai, 11/6.
ANTIMONY TRIOXIDE Chi Mei Metals 2000 bgs (110320 lbs) (Chao He) Shanghia, 11/6.
BARIUM CARBONATE Cometals 4080 bgs (226456 lbs) (Chao He) Hsinkang, 11/6.
BARIUM CHLORIDE Advent Chemical 1360 bgs (75857 lbs) (Xiang He) Hong Kong, 11/6.
Cometals 1360 bgs (75857 lbs) (Xiang He) Hsinkang, 11/6.
ICD Group 1400 bgs (78088 lbs) (Xiang He) Hong Kong, 11/6.
BARIUM HYDROXIDE Brauner Intl 440 bgs (25318 lbs) (Chao He) Kobe, 11/6.
United Mineral & Chemical 340 bgs (37854 lbs) (Xiang He) Hong Kong, 11/6.
BARIUM HYDROXIDE MONOHYDRATE Ore & Chemical *700 bgs (39700 lbs)* (Tadeusz Kosciuszk) Rotterdam, 11/20.
BARIUM SULFATE Ezem 840 bgs (47439 lbs) (Americana) Genoa, 11/18.
BENZOGUANAMINE James E Fox 881 bgs (44438 lbs) (Never Genius) Hamburg, 11/5.
BENZYL ALCOHOL ASPERTAME CDF Chimie 1 tnk (41481 lbs) (Tadeusz Kosciuszk) LeHavre, 11/20.
BENZYL ALCOHOL FCC CDF Chimie 160 dms (80247 lbs) (Tadeusz Kosciuszk) LeHavre, 11/20.
BENZYL ALCOHOL PHOTO Chemical Dynamics 78 dms (37487 lbs) (Gina S) *Antwerp, 11/8.*
BENZYL ALCOHOL PHOTO GRADE L S Russel Chemical 78 dms (38984 lbs) (Gina S) Antwerp, 11/8.
BENZYL ALCOHOL TECHNICAL GRADE ICC Ind 78 dms (39035 lbs) (Gina S) Antwerp, 11/8.
BETA HYDROXYNAPHTHOIC ACID BONAC Ueno Fine Chemical Ind 700 bgs (31482 lbs) (Ming Ocean) Kobe, 11/6.
BETA NAPHTHOL BASF Chemical 620 bgs (34855 lbs) (Chao He) Shanghai, 11/6.
Leyden Customs Expediters 1040 bgs (57320 lbs) (Xiang He) Hong Kong, 11/6.
Parson 680 bgs (37853 lbs) (American New Jersey) Hong Kong, 11/3.
BIOTIN PHARMACEUTICAL Takeda 8 dms (511 lbs) (Leda Maersk) Kobe, 11/20.
BIS HEXAMETHYLENETRIAMINE Navtrans Intl 20 dms (8450 lbs) (Gina s) Felixstowe, 11/8.
BLANC FIXE Ore & Chemical 800 bgs (45609 lbs) (Ever Garden) Antwerp, 11/10.
Ore & Chemical 800 bgs (45609 lbs) (Ever Garden) Antwerp, 11/10.
BONE GLUE New China Trdg 1360 bgs (76973 lbs) (Xiang He) Darien, 11/6.
ASA Chemical 880 bgs (76467 lbs) (Xiang He) Shanghai, 11/6.
Brockton Adhesives 340 bgs (38228 lbs) (Xiang He) Shanghai, 11/6.
BORIC ACID Enichem Americas 324 bgs (36509 lbs) (Cape Hatteras) Leghorn, 11/7.
BORRON AN RESINS Rohm Technology 76 dms (19874 lbs) (Ever Genius) Antwerp, 11/5.
BORRON KS RESIN Rohm Technology 15 dms (827 lbs) (Ever Genius) Antwerp, 11/5.

C-D

CADMIUM PIGMENT Leyden Customs Expediters 34 dms (3748 lbs) (Ming Ocean) Yokohama, 11/6.
CADMIUM OXIDE 432 dms (47518 lbs) (Gina S) Antwerp, 11/8.
CALCIUM CARBONATE Oceanic Shpg 44 plt (90601 lbs) (Xiang He) Kobe, 11/6.
H M Royal 4920 pkg (246375 lbs) (American New Jersey) Kobe, 11/3.
CALCIUM CASEINATE De Zeen 1200 bgs (40728 lbs) (Ever Genius) Antwerp, 11/5.
CAMPHOR POWDER SYNTHETIC 1000 ctn (59525 lbs) (Chao He) Shanghai, 11/6.
CAPRYLIC ACID Robeco Chemicals 80 dms (36606 lbs) (Ever Genius) Antwerp, 11/5.
CEYLON CLOVE STEMS Schiff Food Products 167 bgs (11391 lbs) (Jebel Ali) Dubai, 11/11.
CHAMOMILLE Ecca Freight Systems 200 ctn (1102 lbs) (Americana) Leghorn, 11/18.
CHLORAL HYDRATE Chloral Hydrate Gains Chemic 80 kgs (9312 lbs) (Dart Continent) Felixstowe, 11/5.
CHLORINE DRY BLEACH SODIUM DICHL Olin Chemicals 118 dms (34079 lbs) (Gina S) Felixstowe, 11/8.
CHLOROACETIC ACID SOLID Leschaco 440 dms (138890 lbs) (Nurnberg Express) Antwerp, 11/5.
220 dms (69445 lbs) (Stuttgart Express) Antwerp, 11/11.
CHLORPROPAMIDE Pfizer 1 dms (75 lbs) (Bridgewater) Zeebrugge, 11/9.
Gyma Laboratories 39 dms (2493 lbs) (Carmen Carina) Rijeka, 11/7.
CHROMIC ACID FLAKES White Cross Laboratories 350 dms (41435 lbs) (Carmen Carina) Genoa, 11/7.
CINNAMIC ALDEHYDE PERFUME Chemical Dynamics 76 dms (37487 lbs) (Gina S) Antwerp, 11/8.
CINNAMON LEAF OIL *Polarosa Mfg 8 dms* (3501 lbs) (Jebel Ali) Dubai, 11/11.
CITRIC ACID Omnitrans 1400 bgs (78991 lbs) (Hreljin) Koper, 11/8.
1400 bgs (77161 lbs) (Husum) Hamburg, 11/7.
1188 bgs (122223 lbs) (Ever Genius) Antwerp, 11/5.
GPI 900 bgs (90000 lbs) (Zim Montreal) Haifa, 11/12.
CITRONELLA OIL Bartel Shpg 28 dms (12531 lbs) (Nedlloyd Clement) Nagoya, 11/5.
56 dms (25062 lbs) (Nedlloyd Clement) Nagoya, 11/5.
COCONUT FATTY ACID KORTACID Robeco Chemicals 1 tnk (36993 lbs) (Ever Garden) Rotterdam, 11/10.
COCONUT OIL 1 bks (1120000 lbs) (Northern Puma) Gingoog, 11/8.
2 bks (224000 lbs) (Northern Puma) Zamboanga, 11/8.
1 bks (1120000 lbs) (Stolt Falcon) Gingoog, 11/24.
2 bks (4480000 lbs) (Stolt Falcon) Iligan, 11/24.
COLD PRESSED LEMON OIL Citrus & Allied Essences 10 dms (4299 lbs) (Columbus America) Melbourne, 11/11.
CUMIN SEED Gel Spice 430 bgs (52139 lbs) (Jebel Ali) Dubai, 11/11.
CUMIN SEEDS Militzer & Muench 400 bgs (46501 lbs) (Nurnberg Express) Hamburg, 11/5.
CUMIN SEEDS Sepas Trdg 860 bgs (104278 lbs) (Arild Maersk) Dubai, 11/5.
CYANO ETHYL METHYL AMINO 74 dms (24348 lbs) (NUrnberg Express) Antwerp, 11/5.
CYANURIC CHLORIDE Lonza 320 dms (40071 lbs) (Nurnberg Express) Bremerhaven, 11/5.
DEXTRINE 800 bgs (44533 lbs) (Ever Garden) Rotterdam, 11/10.
DIACETON ALCOHOL Sisas 1 tnk (44379 lbs) (Arild Maersk) Genoa, 11/5.
DIAMINODIPHENYLMETHANE Resin Mobay Chemical 160 dms (38095 lbs) (Stuttgart Express) Rotterdam, 11/11.
DIBUTYL TIN OXIDE Leyden Customs Expediters 120 dms (26043 lbs) (Xiang He) Kobe, 11/6.
DIBUTYLAMINE 1 tnk (37787 lbs) (Gina S) Antwerp, 11/8.
DICHLOROBENZOYL CHLORIDE 16 bls (9841 lbs) (Nedlloyd Clement) Tokyo, 11/5.
DICHLOROSILANE Japan Oxygen 30 cyl (5690 lbs) (Nedlloyd Clement) Tokyo, 11/5.
DICYANDIAMIDE 1600 bgs (89595 lbs) (Husum) Rotterdam, 11/7.
DICYANDIAMIDE HARMLESS Scan Shpg 1600 bgs (134428 lbs) (Tadeusz Kosciuszk) Bremerhaven, 11/20.
DIETHYL PHTHALATE BASF K & F 73 dms (39912 lbs) (Nurnberg Express) Antwerp, 11/5.
DIETHYLENE GLYCOL 1 bks (2046784 lbs) (Stolt Falcon) Singapore, 11/24.
DIMER ACID 5 dms (0 lbs) (Ever Garden) Rotterdam, 11/10.
DIMETHYL CARBONATE SNPE 40 dms (19489 lbs) (Sea Land Pioneer) Algeciras, 11/5.
DIPENTAERYTHRITOL *800 bgs* (35979 lbs) (Ming OceaN0 Yokohama, 11/6.
DIPHENYLAMINE 1 con (40322 lbs) (Nurnberg Express) Greenock, 11/5.
DIPYRIDAMOLE Ceres Chemical 40 dms (2690 lbs) (American New Jersey) Hong Kong, 11/3.

E-G

ETHANOL Whitbread 4 con (148976 lbs) (Stuttgart Express) Greenock, 11/11.
ETHYL CHLOROFORMATE SNPE 80 dms (35450 lbs) (Sea Land Pioneer) Algeciras, 11/5.
ETHYLALUMINUMDICHLORIDE Sherex Chemicals 1 lot (31879 lbs) (American Aquarius) Bremerhaven, 11/19.
EUCALYPTOL Intl Customs Service 11 dms (5020 lbs) (Columbus Queensla) Sydney, 11/6.
FERROUS SULFATE 220 dms (26014 lbs) (Ever Genius) Hamburg, 11/5.
FERROUS SULPHATE 400 dms (47333 lbs) (Ever Garden) Hamburg, 11/10.
FIBER TRIM WITH CALCIUM Radix Group Intl 4092 ctn (44301 lbs) (Dart Continent) Bremerhaven, 11/8.
FIBRE TRIM TABLETS WITH CALCIUM Radix Group Intl 3615 ctn (43939 lbs) (Sea Land Voyager) Bremerhaven, 11/8.
FISH OIL 70 dms (32099 lbs) (Stuttgart Express) Hamburg, 11/11.
Transcontinental Transport S 76 dms (35767 lbs) (Stuttgart Express) Bremerhaven, 11/11.
FLUOROBENZENE Rhone Poulenc 25 dms (12676 lbs0 (Freedom Ms) Fos, 11/4.
FLUOROCARBON F 112 Nagase America 50 dms (36266 lbs) (Ming Ocean) Kobe, 11/6.
FURFURYL ALCOHOL Dunbar Terminal Operators 1 bks (1840477 lbs) (Martha A) Rotterdam, 11/11.
GELATINE Blue Anchor 8 dms (4588 lbs) (Numberg Express) Greenock, 11/5.
Nitta of America 176 dms (41517 lbs) (Zim California) Osaka, 11/7.
GINGER Fritzche Dodge & Olcott 782 bgs (41491 lbs) (Ever Garden) Felixstowe, 11/10.
GINGER OIL 25 ctn (2434 lbs) (Visha Pankaj) Algeciras, 11/15.
GINGER OLEORESIN 2 dms (683 lbs) (Visha Pankaj) Algeciras, 11/15.
GINSENG Multi Trdg 600 bxs (780 lbs) (Ming Ocean) Kobe, 11/6.
GLUCONATE Barlex Laboratories 63 dms (4610 lbs) (Stuttgart Express) Hamburg, 11/11.
GLUCOSE La Preferida 1250 cs (33345 lbs) (Husum) Rotterdam, 11/7.
GLYCERIN HARMLESS Trans World Shpg 5 tnk (246166 lbs) (Husum) Hamburg, 11/7.
GLYOXYLIC ACID 68 dms (41204 lbs) (Tadeusz Kosciuszk) LeHavre, 11/20.
GRAPE SEED OIL Uti Lines 30 brl (13757 lbs0 (Ever Genius) Hamburg, 11/5.
GRAPEFRUIT OIL City Bank 12 pkg (5079 lbs) (Zim Montreal) Haifa, 11/12.
10 dms (4233 lbs) (Punta Ancla) Santos, 11/23.
GRAPHITE Asbury Graphite Mills 540 bgs (81351 lbs) (Jebel Ali) Dubai, 11/11.
180 bgs (40584 lbs) (Visha Pankaj) Algeciras, 11/15.
GREEK OREGANO Durkee Foods 1102 bgs (22046 lbs) (Cape Hatteras) Piraeus, 11/7.
GROUND SESAME SEED New York Mutual Trdg 3 ctn (0 lbs) (Ming Ocean) Yokohama, 11/6.
GUAIACOL Rhone Poulenc 79 dms (37827 lbs) (Arild Maersk) Marseille, 11/5.
GUAR GUM Tic Gums 700 bgs (36787 lbs) (Liberty) Valencia, 11/11.

H-J

H ACID Nagase America 500 bgs (26032 lbs) (Ming Ocean) Yokohama, 11/6.
HEXAMETHYLDISILANE Uti Lines 7 dms (2562 lbs) (Ever Genius) Hamburg, 11/5.
HEXANOL Monsanto 1 bks (1102300 lbs) (Stephanie) Hamburg, 11/13.
HEXYLENE GLYCOL B P Oil 1 tnk (44577 lbs) (Gina S) Felixstowe, 11/8.
HYDRATE D HYDRAZINE 80 dms (37434 lbs) (Liberty) Fos, 11/11.
HYDROFLUORIC ACID BDP Intl 136 dms (73458 lbs0 (Zim California) Osaka, 11/7.
HYDROGEN CHLORIDE Matheson Gas Products 11 cyl (1213 lbs) (Columbus Queensla) Sydney, 11/6.
HYDROGEN SULPHIDE Matheson Gas Products 38 cyl (4189 lbs) (Columbus) Queensla) Sydney, 11/6
HYDROGENATED CASTOR OIL 2000 bgs (105358 lbs) (Punta Ancla) Santos, 11/23.
United Catalysts 800 bgs (42028 lbs0 (Punta Ancla) Santos, 11/23.
HYDROXY CITRONELLAL BASF K & F 76 dms (32591 lbs) (Nurnberg Express) Antwerp, 11/5.
HYDROXY QUINOLINE Maag Agrochemicals 210 dms (24676 lbs) (Gina S) LeHavre, 11/8.
HYDROXYPHENYL GLYCINE Beecham 182 ctn (16856 lbs) (American Aquarius) Felixstowe, 11/13.
HYDROXYZINE HCL HARMLESS Uti Lines 22 dms (2868 lbs) (Ever Genius) Hamburg, 11/5.
HYDROXYZINE PANOATE HARMLESS Uti Lines 3 dms (271 lbs) (Ever Genius) Hamburg, 11/5.
INSULIN E R *Squibb & Sons 20 pcs (28125 lbs) (Sea Land* Voyager) Bremerhaven, 11/6.
ISOBORNEOL Biddle Sawyer 44 dms (4850 lbs) (Jebel Ali) Dubai, 11/11.
ISOBUTYL METHACRYLATE 72 dms (32540 lbs) (Dart Continent) Felixstowe, 11/5.
ISOPROPYL NITRATE Arpol Petroleum 80 dms (41976 lbs) (Ever Genius) Felixstowe, 11/5.
ISOSTEARIC ACID COSMGRADE Aizo 78 dms (34048 lbs) (Ever Garden) Rotterdam, 11/10.
J ACID DRY Ciba Geigy 160 dms (38095 lbs) (Nurnberg Express) Hamburg, 11/5.

L-M

L ASPARTIC ACID Ajinomoto 40 bxs (71429 lbs) (Ever Genius) LeHavre, 11/5.
40 bxs (71429 lbs) (Ever Garden) LeHavre, 11/10.
L EPHREDRINE HCL Ganes Chemicals 80 ctn (4938 lbs) (Leda Maersk) Hong Kong, 11/20.
LACTOSE NF XVI DCL 21 Votainer Consolidation Servi 24 dms (2813 lbs) (Stuttgart Express) Rotterdam, 11/11.
LANOLIN OIL 234 dms (109799 lbs) (Zim California) Osaka, 11/7.
LAVANDIN OIL 23 dms (10866 lbs) (Zim Montreal) Barcelona, 11/12.
LEAD ACETATE Uti Lines 3 pbx (0 lbs) (Ever Garden) Hamburg, 11/10.
LEAF ALCOHOL Mitsui 10 dms (4012 lbs) (Ming Ocean) Kobe, 11/6.
LEMON GRASS OIL 20 dms (8776 lbs) (San Pedro) Haina, 11/7.
LEMON OIL 38 dms (16923 lbs) (Zim Montreal) Haifa, 11/12.
H W St John 15 dms (6349 lbs) (Punta Ancla) Santos, 11/23.
Pittra 6 dms (2606 lbs) (May No 15) Genoa, 11/22.
LEMONGRASS OIL Polarome Mfg 25 dms (11001 lbs) (Sternberg) Sto Tomas, 11/7.
LITHIUM CARBONATE GRANULES Foote Mineral 1680 bgs (44092 lbs) (CCNI Antartico) Antofagasta, 11/17.
LITOPLAST VINYL ADHESIVE Antilleanse Handelmij 2 crt (3527 lbs) (Sea Land Pioneer) Algeciras, 11/5.
LITSEA CUBEBA OIL 43 dms (18770 lbs) (Chao He) Shanghai, 11/6.
LOCUST BEAN GUM Polypro Intl 600 bgs (44092 lbs) (Sea Land Voyager) Rotterdam, 11/6.
MAGNESIUM CHLORIDE Potash Import & Chemical 1260 bgs (128616 lbs) (Sea Land Voyager) Bremerhaven, 11/6.
400 bgs (40344 lbs) (Stuttgart Express) Bremerhaven, 11/11.
MAGNESIUM OXIDE Total Port Clearance 320 dms (37532 lbs) (Xiang He) Kobe, 11/6.
Roussel Pharmaceutical Produ 662 dms (78810 lbs) (Ming Ocean) Kobe, 11/6.
MAGNESIUM SULPHATE ANHYDROUS Potash Import & Chemical 400 bgs (40344 lbs) (Stuttgart Express) Bremerhaven, 11/11.
MALEIC ANHYDRIDE NON BENZOIC Miljac 720 bgs (40128 lbs) (Tadeusz Kosciuszk) Rotterdam, 11/20.
MARIGOLOT EXTRACT CRUDE J Klein 34 dms (14903 lbs) (Copiapo) Guayaquil, 11/12.
MERCURY 500 flk (42295 lbs) (Ming Ocean) Kobe, 11/6.
META AMINOBENZOTRIFLUORIDE DANGE Rhone Poulenc 5 dms (2447 lbs) (Freedom Ms) Fos, 11/4.
META TOLUIC ACID Mitsubishi Gas Chemical 2160 bgs (120953 lbs) (Ming Ocean) Kobe, 11/6.
METAL OXIDE ARRESTOR DICS Hartrodt Schmidt 27 ctn (1733 lbs) (Numborg Express) Dublin, 11/5.
METHIONINE ANIMAL FEED Rhone Poulenc 4000 bgs (207232 lbs) (Arild Maersk) Marseille, 11/5.
METHOCARBAMOL 100 dms (6393 lbs) Xiang He) Hong Kong, 11/6.
METHYL CEDRYL Felton Intl 32 crt (3951 lbs) (Xiang He) Shanghai, 11/6.
METHYL CELLULOSE Mitrans 300 dms (37037 lbs) (Ming Ocean) Yokohama, 11/6.
METHYL CYANOACETATE Bemo Shpg 25 dms (12236 lbs) (Ming Ocean) Kobe, 11/6.
METHYL DIHYDROJASMONATE Biddle Sawyer 11 dms (4699 lbs) (Ming Ocean) Kobe, 11/6.
METHYL ETHYL KETONE 1 bks (1101048 lbs) (Shoun Salute) L Avera, 11/12.
METHYL GALLATE 7 dms (849 lbs) (Ming Ocean) Kobe, 11/6.
METHYL PHENYLACETATE Inter Maritime Fwdg 1 tnk (45084 lbs) (Ever Garden) Antwerp, 11/10.
METHYLMETHACRYLATE MONOMER Degussa 2 tnk (79520 lbs) (Stuttgart Express) Bremerhaven, 11/11.
MICROCRYSTALLINE CELLULOSE MG100 Alba Fwdg *120 dms (14683 lbs) (Ming Ocean) Kobe, 11/6.*
MICROCRYSTALLINE WAX TFL Sales 4350 crt (201392 lbs) (Freedom Ms) Valencia, 11/4.
MOLYBDENUM OXIDE Chemmet 85 dms (39767 lbs) (CCNI Antartico) Valparaiso, 11/17.
MONO PENTAERYTHRITOL Recochem 2100 bgs (119791 lbs) (Copiapo) Valparaiso, 11/12.
MONOCHLORACETIC ACID Leschaco 3960 bgs (447534 lbs) (Numberg Express) Antwerp, 11/5.
1980 bgs (223767 lbs) (Stuttgart Express) Antwerp, 11/11.
MONOSODIUM GLUTAMATE Ajinomoto 1440 bgs (73016 lbs) (Punta Ancla) Santos, 11/23.
1 con (39839 lbs) (Punta Ancla) Santos, 11/23.
MONOSODIUM GLUTAMATE Ajinomoto 720 dms (77999 lbs) (Punta Ancla) Santos, 11/23.
MONOSODIUM GLUTAMATE PURITY Lep Transport 1600 bgs (80247 lbs) (Nedlloyd Clement) Kobe, 11/5.
MUSK XYLENE 100 kgs (11618 lbs) (Dart Continent) Felixstowe, 11/5

N-O

N BUTYL METHACRYLATE Degussa 1 tnk (37653 lbs) (Stuttgart Express) Bremerhaven, 11/11.
N BUTYL METHACRYLATE FLAMM LIQUI Degussa 1 con (38272 lbs) (Numberg Express) Bremerhaven, 11/5.
NAPHTHOL Parson 400 dms (25574 lbs) (Xiang He) Shanghai, 11/6.
Top Tex 20 bxs (10445 lbs) (Nurnberg Express) Bremerhaven, 11/5
Top Tex 5 cs (4641 lbs) (Nurnberg Express) Bremerhaven, 11/5.
NICKEL CHLORIDE Le Nickel 800 bgs (41226 lbs) (Gina S) LeHavre, 11/8
NICOTINAMIDE FEED GRADE Reilly Tar & Chemical 1600 bgs (80242 lbs) (Nurnberg Express) Antwerp, 11/5
Vitachem 800 bgs (44621 lbs) (Dart Continent) Antwerp, 11/5.
NITRIC OXIDE CYLINDERS Matheson Gas Products 4 cyl (441 lbs) (Columbus Queensla) Sydney, 11/6
NON HAZARDOUS DYE Kam Container Line 30 pkg (3327 lbs) (Nurnberg Express) Greenock, 11/5.
NON HAZARDOUS HALIDES Ameribrom 120 trw (235452 lbs) (Zim Montreal) Haifa, 11/12.
NON HAZARDOUS MEDICINES Bermuda Fwdrs 23 ctn (919 lbs) (Numberg Express) Greenock, 11/5.
OLEORESIN TURMERICA 40 ctn (2562 lbs) (Visha Pankaj) Algeciras, 11/15.
OLEORESIN SPANISH PAPRIKA Meer 110 dms (4947 lbs) (Arild Maersk) Valencia, 11/5.
OLIVE OIL Berio Imports 5136 cs (96749 lbs) (Carmen Carina) Leghorn, 11/7.
50 plt (273858 lbs) (Americana) Leghorn. 11/18.
Bertolli 8562 ctn (133665 lbs) (Cape Hatteras) Leghorn, 11/7.
16098 ctn (266225 lbs) (Bridgewater) Lisbon, 11/9.
OXYTETRACYCLINE HYDROCHLORIDE Pfizer 40 dms (4036 lbs) (Bridgewater) Zeebrugge, 11/9.
OXYTETRACYCLINE HYDROCHLORIDE OR Helm New York Chemical 100 dms (11905 lbs) (Carmen Carina) Rijeka, 11/7.

P-R

PALM FATTY ACID 1 bks (664290 lbs) (Stolt Llandaff) Rotterdam, 11/16.
PALM KERNEL OIL Loders Croklaan 1528 ctn (87250 lbs) (Sea Land Voyager) Rotterdam, 11/8.
2 bks (2223200 lbs (Stolt Llandaff) Pt Kelan, 11/16.
PANCRELIPASE POWDER Organon 28 brl (2846 lbs) (Nurnberg Express) Rotterdam, 11/5.
PAPRIKA AA Sayla 350 bgs (38836 lbs) (Liberty) Valencia, 11/11.
Accurate Ingredients 3 dms (1442 lbs) (Freedom Ms) Valencia, 11/4.
Griffith Laboratories 850 bgs (36674 lbs) (Cape Hatteras) Valencia, 11/7.
PARA CRESIDINE SULFONIC ACID 76 dms (20736 lbs) (Ming Ocean) Kobe, 11/6.
PARA FLUORONITROBENZENE Rhone Poulenc 13 dms (6592 lbs) (Liberty) Fos, 11/11.
PARA METHYLAMINOPHENOL SULFATE 62 dms (12974 lbs) (Leda Maersk) Tokyo, 11/20.
PARACETAMOL CRYSTAL Sinochem 420 kgs (26852 lbs) (Xiang He) Shanghai, 11/6.
PARAFFIN Atlantic Container Line 72 plt (135583 lbs) (Numberg Express) Bremerhaven, 11/5.
PARAFFIN PETROLEUM WAX Astor Wax 11 plt (24976 lbs) (American Aquarius) Felixstowe, 11/13.
PARAFFIN WAX Astor Wax 5 plt (11354 lbs) (American Aquarius) Felixstowe, 11/13.
Inter Maritime Fwdg 18 plt (44842 lbs) (American Aquarius) Felixstowe, 11/13.
PARAFORMALDEHYDE POLVO T R America Chemical 22 bbg (49714 lbs) (Sea Land Pioneer) Algeciras, 11/5.
PARAFORMALDEHYDE T R America Chemicals 40 bbg (45195 lbs) (Sea Land Pioneer) Algeciras, 11/5.
PENTAERYTHRITOL Degussa 881 bgs (44438 lbs) (Stuttgart Express) Bremerhaven, 11/11.
PENTANES Northville Ind 8321460 gal (44080960 lbs) *(Panama) Pajaritos, 11/7.*

Continued on Page 52

ME SELECT used machinery

INCONEL/INCOLLOY

STRONG SCOTT SOLIDAIRE DRYERS:

- Mdl SJI-42-22, 42" dia x 22' lg, Incolloy 800 w/carbon steel jacket, 100 HP exp prf mtr. (2)
- Mdl SJI-52-32, 54" dia x 32' lg, Incolloy 800 w/carbon steel jacket, 125 HP exp prf mtr. (2)
- Mdl SJS-24-16, 24" dia x 16' lg, 304 S/ST, dimple jacket, 50 HP vari drv.

BIRD DECANTER CENTRIFUGES:

- 36" x 72", inconel, 10 deg. cylinder, 150 HP mtr, w/wash-out assembly, gauges, valves, circulating oil system, oil pump & filter.

KOMAREK GREAVES BRIQUETTING PRESSES

Mdl 150MS-20.5-9.2, w/rolls measuring 20.5" x 9.2", 85 HP bz 300 speed reducer, 34.2:1 ratio to Linkbelt vari speed drv, incl K/Q hydraulic cylinder, mdl H-21-S end feeder.

TWO AVAILABLE

LARGE BIRDS

(12) 40" x 60" Bird decanter, S/ST, 15/3 deg. contour, 5" pitch, single lead conveyors, w/ Stellite hard surfacing, 80:1 gearbox, 100 HP V-belt main mtr drv. New late 60's. Has seen limited use!!!

EIMCO ROTARY VACUUM PRECOAT FILTERS

8' dia x 8' wd, S/ST, system incl drives, vacuum pump & receiver.

THREE AVAILABLE

LINK BELT ROTO LOUVRE DRYER

10'3"x36' lh, mdl 1003-36, complete system incl 50 HP drv, firebox w/200,000,000 BTU gas burner, all fans, duct work & controls, multi-cyclone collector, Sly 30,000 CFM baghouse.

Still Installed–Call for FOB pricing.

WESTFALIA CENTRIFUGE
Type SB80-06-177, SST, w/7 HP DRIVE.
NEW 1981

POLYPROPYLENE FILTER PRESSES

Shriver 36"x36", closed delivery, 1⅞" thick frames, hydraulic closing system.

4 IN STOCK

RAYMOND ROLLER MILLS

(3) Raymond high side roller mills, mdl 5057, double whizzer separator, fan, feeder, cyclone, duct work & bucket elevator.

STRONG SCOTT ROTARY VACUUM CONTINUATOR DRYER

316 S/ST, mdl CRJ-884-29, 1100 cu. ft, 150 HP drv, 550 sq. ft. of heat transfer area, 84" dia x 29' lg.

NEW 1966

INDUSTRIAL PRESSURE LEAF FILTERS

(1) 800 sq. ft & (1) 200 sq. ft rubber lined tank, quick opening pneumatic door, retractable tank assembly.

SAN FRANCISCO STOCK

WYSSMONT TURBO DRYERS

- Mdl L-12, steam heated, 48" dia S/ST trays & sides, w/heater controls, radiator & feed system.
- Mdl N-22, 8' dia trays 22 high, S/ST, steam heated. *May be shipped in one piece.*

LARGE REACTOR

6000 gallon, 316 S/ST, jacketed, agitated

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DELAVAL MAPX-207 S/S OIL SEPARATOR
SHARPLES AS-16,16V,26 S/S clar./sep. (Rebuilt)
BAKER PERKINS HS-10W S/S "Lab" peeler
BIRD 24x60 ST/CCF design
WESTFALIA SAMR 5036 SS 15 HP
DELAVAL ACVO Disc/Nozzle SS 20 HP
KRAUSE-MAFFEI 18.5" Pusher S/S (Rebuilt)
SHARPLES P-3400, 4000 SS horiz. solid bowl
ALFA-LAVAL NX-214SS DECANTER 20 HP
SHARPLES 48"x30" T-1600 AUTO 316 SS (2)
SHARPLES Mark 3 14" SS perf. auto basket

MIXERS/BLENDERS

P/K 2, 10, 15, 75 cu.ft. SS Twin Shell w/bar
5, 20, 60, 70, 320 cu. ft. S/S dbl. cone w/drive
120, 135, 155, 175, 250, cu.ft. dbl rib S/S
300 gal. J.H. Day Pony Mixer Steel w/can
(2) Vrieco 100 cu.ft. S/S Nauta Mixers

LITTLRFORD 42 cu. ft. S/S jkt. w/choppers
5, 100, 300, 750 S/S dbl. arm w/drive

DRYERS

Patterson 49 cu. ft. rot. vac. cyl. S/S 3'x 7'
P/K 5, 10, 370 cu.ft. SS liq-Sol. Processor
LOUISVILLE 8x45 SS Rot. Hot Air-Steam
BOWEN 4'6" No. 2 TOWER SPRAY DRYER S/S GAS NOZZLE
Spray Dryer, Bowen 30" lab, Niro 48" utility S/S

FILTERS

SPARKLER 352 sq. ft. S/S Mod V-R-32
SPARKLER 18-D-5 S/S Vert. Tank Press Leaf 60#
2.5'x 13' S/S Vacuum Belt Filter
18", 24", 36", 42" P/F Presses C.I. Poly or S/S
SPARKLER HRC 150, 200 S/S Horiz. Press. Leaf
35, 50, 150, 300 sq.ft. Press Leaf S/S

TANKS/REACTORS

29,000 GAL. HORIZ. 316SS Tanks 40# (2)
200 Gal. S/S Reactor 150#/150# W/Agit.
1,200 GAL. T-316 SS REACTOR 30 75/# JKT. w/Agit.
12000 Gal. Horiz SS w/Top Agit, DH. Hds.
16,000 Gal. S/S Reactor 50#/50# 30 HP Agit
30, 50, 150, 200, 1000 Gal. S/S Reactors 100#/75#

MISC. SPECIALS

PFAUDLER 1500 gal. S/S Reactor
MG 1000, 2000, GPH HOMOGENIZER 3000 psi.
65 HP MODULATIC Boiler 250 psi Gas Fired
SIMPSON 1½F, S/S MIX MULLER
6'6"x 78' Autoclave 150# w/track QOD
-FITZ Mills S/S D, D12, FAS012 & Chilsonators
7'x(any length) AUTOCLAVES 100# Code W/Track
-100-10,000 sq.ft. Ht./Exchr's S/S & C/S
150 cu. ft. P/K Twin Shell stl. 10 HP
-100-10,000 gal. G/L Tanks & Reactors
Micro - Pulv. 1SH S/S 5HP W/Screw Feed

VIDEX WAREHOUSE SPECIAL
THEO WALTER 225 Gal. Heresite Lined
S/S Reactor 100# F.V./Int.-40# jkt.
10 HP Vari - Drive Dbl. Mot. Agit.

SAVE — **PLANT SITE SPECIALS**

36"x72" Bird horiz. solid bowl cent. stl.
Stansteel 8x50 Rot Hot Air Dryer w/Burner, C/S
60" Sweco S/S 1-deck screen
2000 gal. Pfaudler G/L reactor w/agit.
Bird 40x60 316 S/S Cent. 114:1 100 HP
Feinc. 5'x7' S/S Rot Vac filter
40"x 120" S/S Rotex Vib. Screen 2-deck
12,000 gal Frp Vert. Tanks (2)
1000 gal. Pfaudler G/L reactor 75#/75# w/agit.
Bird 18x28 S/S Contour Bowl Centrifuge
P/S 6' x 45' SS CONVEYOR DRYER
22,500 Gal. Tank/Silo SS Vert 12 ft. x 24ft.

SAVE — **JUST PURCHASED**

Tanks-20,000 Gal. C/S horiz w/Saddles (4)
Sparkler 18S11 S/S press leaf filter jkt.
750 gal. S/S reactor 100# F.V./40# 30 HP agit.
50 Gal. G/L reactor/still
3'x4' Elmco R/L rot. vac. filter
537 sq. ft. Mikro dust collector
Niagara 24 sq. ft. Press. leaf filter S/S
200 gal SS vacuum receiver
M/G Homogenizer 250 M12-8 TBS (8000 PSI)
Patterson, Abbe 3,5 cu. ft. S/S dbl. cone vac. dryers
Stokes 73 sq. ft. S/S vac. shelf dryer
B/P 5, 15, 50, 150 GAL. STL. D/ARM MIXER JKT.

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GROEN 10-QT S/S SWEEP AGITATED TILT KETTLE
MRM 5-HEAD S/S SEMI-AUTO PRESSURE GRAVITY FILLER
SWENSON 36 CU. FT. T316 S/S JKTD RIBBON MIXER
BUFLOVAK 37.6 SQ. FT. CHROME-PLATED DOUBLE DRUM DRYER
GROEN INA-200 SP 200-GAL S/S INCLINED SINGLE MOTION KETTLES-2 AVAILABLE
UNION PROCESS 1S/TYPE B ½-GAL. S/S X-PROOF LAB ATTRITOR
SPERRY SIZE 30 30"x30" NICKEL-PLATED P&F FILTER PRESS
COZZOLI VR528 8-HEAD S/S PISTON FILLER
P/K 20 CU. FT. S/S TWIN SHELL MIXER
P/K 75 CU. FT. S/S TWIN SHELL MIXER W/LIQUID-SOLID BAR
MERCER 4-HEAD HOT MELT GLUE SYSTEM
READCO 10-GAL T 316 S/S JKTD DOUBLE ARM MIXER
WESTERN STATES Q320 "SLUDGE-A-TRON" SOLID BOWL CENTRIFUGES-3 AVAILABLE
DAY 16"x40" 3-ROLL DISPERSION MILL W/HYDRAULIC CLOSURE
8 LOAFCO 9-3 SHREDDER W/CONVEYOR
VIBRA-SCREW S/S VOLUMETRIC LIVE BIN SCREW FEEDER
NASH 702 VAC PUMP W/30 HP MOTOR
NASH CL-1002 VAC PUMP W/75 HP MOTOR
LADISH/TRI-CLOVER S/S AIR-OPERATOR VALVES-10 AVAILABLE
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MACOFAR AUTOMATIC CAPSULE FILLER-60,000 CPH-EXCELLENT CONDITION

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Tanks: 250-1400 Gal. storage & mixing, S/S & fiberglass
5000 Gal. 304 S/S storage tank, vertical, closed, dished hds.
(2) *Richmond* 3000 Gal. S/S Reactors, 80/40 PSI, 50 HP 2-Spd.
Richmond 3000 Gal. S/S Reactor, 60/40 PSI, 20 HP.
(3) Pfaudler 30 Gal. S/S Reactors, 60/90 PSI, 1½ HP XP V/S.
Hercules 600 Sq. Ft. "Roto-Jet" Filter, 316 S/S, 60 PSI.
Jacobson 8DSF-11 "Universal" Hammer Mill, 100 HP.
(2) Entoleter Type EIM "Centrimil", 48" Dia., 316 S/S, 100 HP.
Simpson "Rotex" model 861 Sifter, 316 S/S, single deck.
Fitzmill, 316 S/S, No. DKAS012, 20 HP.
Holo-Flite Screw Dryer, 16" Dia. x 20' L., C/S, Jkt. trough.
Chromalox 200 KW Hot Oil Unit.
Chromalox 20 KW Hot Oil Unit (ALL XP)
Sterling 12 KW Hot Oil Unit.
Hockmeyer 50/25 HP High Speed Disperser S/S, XP/2 Spd.
(3) Sussmeyer model SRS Sand Mills, 30 HP XP.
Morehouse-Cowles 12-30 & 10-25 Sand Mills, 40 & 25 HP XP.
Patterson Steel Ball Mills, 6'x5' & 6'x8' and other sizes.
Abbe 4½x13' Continuous Steel Ball Mill, 60 HP.
Patterson & Abbe Ceramic-Lined Pebble Mills from 15"x21" up.
Reliable 6"x12" Two Roll Mill, 5 HP.
110 Cu. Ft. C/S heavy-duty ribbon blender, jkt. 20 HP.
(2) Letsch S/S sanitary ribbon blenders, 12.25 Cu. Ft., 2 HP.
J.H. Day "Nauta" Blender, 21, Cu. Ft. 316 S/S, MAX
Votator (2) 4"x48" L. Tubes, 316 S/S, 15 HP.
Dorr-Oliver "Web-Trol" 6'x8' Rot. Vac. Filter, 316 S/S.
Crandall 5-Gal. subsurface weigh-type filler, S/S, model F-3.
Turba-Film 1.13 Sq. Ft. Lab evaporator, 316 S/S, 1 HP complete.
Nichols/Niro 10 ft. Dia. Spray Dryer, 125 #/hr., 316 S/S.
Baker-Perkins & Readco dbl. arm mixers.
Heat Exchanger 489 sq. ft., 304 S/S, 75/15 psi.
(2) Rietz prebreaker, *UNUSED* Model PB-10, C/S.
(4) Rietz extructor, UNUSED Model RE-12, C/S.

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DRYERS

Drum Dryers/Flakers
(1) 24" dia. x 36" Buflovac SS dble. drum dryer
(2) 32" dia.x 106" Blaw Knox CI dble. drum dryer
(1) 32" dia. x 17'6" Sandvik SS belt flaker
(1) 36" dia.x 10' Buflovak CI dble. drum dryer
(3) *42" dia.x120" Blaw Knox CI dble. drum dryer*
(1) 48" dia.x 28" drum flaker, chrome plated drum
(1) 48" dia.x 40" CI flaker, mfg. by Buffalo Foundary
(1) 48" dia.x 40 drum flaker, nickel plated drum, mfg. Blaw-Knox

Fluid Bed
(1) 60 Kg. Aeromatic, Batch, 6'x9', 56,000
(1) 100 Kg. Aeromatic Model ST 100, sanitary SS
(1) Fitzpatrick Model FA 250, SS, 20 HP XP

Holoflite
(1) Western Precipitation Model P80SSO-A, twin screw, 12" dia. x 20' long, SS constr., jckt. rated 15 psi, complete with 7.5 HP vari-speed drive.
(1) New/Never-Used Joy Processor, CS, single screw, 16"x16' long, rated 110 psi @ 340° F., sprocket & chain drive by 1.5 HP varispeed drive.

Rotary Vacuum
(1) 200 Cu. Ft. Stokes, SS constr., complt.
(3) 165 Cu. Ft. Pfaudler, Double Cone, G/L, 30 &FV/50 psi jktd., 15 HP vari-drive
(1) 150 Cu. Ft. Blaw Knox, Nickel
(2) 132 Cu. Ft. Stokes, Nickel
(1) 72 Cu. Ft. Blaw Knox, SS
(1) 60 Cu. Ft. Titanium Double Cone
(1) 60 Cu. Ft. Gemco, 316SS sanitary, double cone
(1) 37.5 Sq. Ft. Horiz. Thin Film, vac. int. & 150 psig, 304/316SS
(1) 37 Cu. Ft. Gemco, SS
(1) 30 Cu. Ft. P-K Twin Shell, 304SS
(1) 20 Cu. Ft. Abbe Twin Cone, 304SS

Spray
(1) 30"x3' Bowen Laboratory w/3' cone bottom, SS constr., w/centrifugal atomizer, 3 HP blower & motor.(1)
(1) Niro lab size 32" diax2' w/2' cone w/centrif. atomizer SS contacts
(1) 16' dia. Bowen complt. system SS contacts, new 1976

CENTRIFUGES

(1) Delaval BRPX 309, SS, 20HP
(1) Unused Model B-10 Podbielniak, Alloy 20
(1) Sharples AS-26, SS
(1) Sharples AS-16P, 316SS
(1) Alfa-Laval SS Decanter, Horiz., Mdl. NX314
(1) Dorr Oliver Mdl. CH30 CSU "*Marco*," 316SS contacts, 150 HP
(1) Baker Perkins S-32 "Pusher Type," SS, 50 HP
(1) Bird 18" x 28", 316 ELC, contour bowl.
(2) Bird 24"x38", 316SS, 40 HP
(3) Sharples P-3000, 316SS, 30 HP
(1) Sharples P-1000, SS 20HP
(1) Unused Bird 36 x96, 317L SS
40" x 20" Tolhurst centrifuge, Kynar lined, perf. basket
(1) Tolhurst 48" x 24" perf. basket, 316SS sanitary, auto. plow & discharge, rated 85 #/cu. ft. @ 900 RPM, 20 HP XP.
(1) Tolhurst 48" x 24" Batchmaster, 316SS, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Tolhurst 48"x24" Batchmaster, rubber lined, perf. basket, w/hydr. plow & 20HP hydr. drive
(1) Tolhurst 48" x 24" Batchmaster, Heresite lined, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Western states 48"x 24", 316 SS
(1) Fletcher 48"x 28" Suspended type, SS perf. basket, 20/10 HP
(1) Sharples Tornado 48" x 30", 316SS, perf. basket, 40 HP XP
(1) Alfa Laval Model MAPX 210 T24, SS wetted parts
(2) Sharples C-27, 316 SS, wetted parts, 40 HP
(1) Sharples C-20, *Super-D-Hydrator, SS, 30 HP*
(1) Dorr Oliver Marcone Screener Model C-400 X2, all SS, twin screw disch., 10 HP

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COFFEE PLANT LIQUIDATION

(1) Mdl. #DASO-6 Fitzmill w/15 HP motor, on stand.
(1) Mdl. #D-6 Fitzmill w/15 HP main motor & 2 HP on stand.
(1) Mdl. #2DH Micro-Pulverizer.
(1) Mdl. #3TH Micro-Pulverizer, SS, w/40 HP main motor & ¼ HP screw motors.
(1) Micro-Pulsair SS Reverse Jet Dust Collector, Model #64-8-6-20.
(1) 8" x 42" Votator Scrapped Surface Heat Exchanger, w/5 HP motor & jckt.
(1) 48" Sweco Single Deck Screen w/cover, SS constr., 1 HP
(1) 32" w. x 8' lg. Witte Vibrating Conveyor, SS, w/cover, 2-deck.
(1) 2'x8' Witte SS Fluid Bed Dryer w/perf. plate.
(1) 32" W. x 13' Sandvick Belt Flaker, SS, 9' cooling section.
(1) Stokes Freeze Dryer System, complt. w/prebreaker, micro-vac. & York chiller.
(2) Jones Dewatering Presses.
(1) 1500 Gal. SS Jcktd. Mix Tank, 3 HP, dished top, flat bottom.
(2) 2000 Gal. SS Mix Tanks, sanitary fittings.
(2) 1500 Gal. SS Mix Tanks, sanitary fittings, ¾ HP Lightnin.
(1) 2000 Gal. SS Mix Tank, sanitary fittings, 3 HP Lightnin.
(1) 2000 Gal. SS Storage Tank.
(2) 1800 Gal. SS Mix Tanks, sanitary fittings, 3 HP Lightnin.
(1) 1000 Gal. SS Storage Tank, agitator mount, (no agitator)
(1) 1000 Gal. SS Jcktd. Mix Tank, atmos. int., 150 psi jckt.
(3) 1500 Gal. SS Mix Tanks, 3 HP Lightnin.
(2) 22' Dia. Spary Dryers, complete system.

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RECENT PURCHASES

(1) Carrier 2'x48' Vibrating fluid dryer, 316SS
(1) Podbielniak mdl. #9700-2 Cent., 250 PSI
(1) 5,000 gal. CS, Vertical Sphere, Rated 1007 PSIG
(2) 12¾' dia.x307½' Long Packed *Col. 304SS*, 275 design pres.
(1) 64 sq.ft. U-Tube Heat Exchanger, all 316SS 75/150 psi
(1) 86 sq.ft. Heat Exchanger, all 316SS 75/450 psi
(1) 86 sq.ft. Heat Exchanger, CS/SS 75/450 psi
(1) 90 sq.ft. Heat Exchanger, CS/SS 75/75 psi
(1) 680 sq.ft. Heat Exchanger, CS/SS 75 PSI Shell
(1) 1006 sq.ft. Heat Exchanger, All 316SS 75/150 PSI
(1) 1401 sq.ft. Reboiled CS/SS 75/150 PSI
(3) 550 gal. Levus Lined Plastic Tanks 4' dia.x5½' st.sd.
(2) Fairbanks Morse Gas Compressor 3380 CFM 600 h.p.
(2) I-R Type ESV Compressors 30 HP
(1) GATX Fuller Air Compressor 50 HP
(1) Corken Compressor 7.5 HP

EVAPORATORS

(1) 1 Sq. Ft. Artisan "Kontro" Ajust-O-Film sys., 316SS
(1) 1.4 Sq. Ft. Luwa Wiped Film, 316SS, 1.5 HP
(1) 1.4 sq. Ft. Luwa thin film SS
(1) 2.5 Sq. Ft. Rodney Hunt Turbo Film 347 SS
(1) 5.4 sq. Ft. Luwa filmtruder, 316 LSS
(1) 6.54 Sq. Ft. Votator Evaporator System, 316 SS contracts, 15 psi & FV & int., 150 psi jkt.
(1) 8.7 Sq. Ft. Rodney Hunt Turbo-Film, 304 SS contact parts, 15 psi & FV/150 psi jckt.
(1) 10.6 Sq. Ft. Luwa SS Wiped Film Evap. System, 15/650 psi
(1) 19.5 Sq. Ft. Votator Turba-Film, 304 Sanit. SS FV/150 psi 10HP
(1) 20 Sq. Ft. Kontro Horiz. Adjust-O-Film, 316ELC, 50 psig, 15 HP
(1) Approx 31 Sq. ft. Vert., Turbo-Film Processor, 304 SS Contacts
(1) Like New 37.8 Sq. Ft. Luwa Horiz. Thin-Film Dryer, 304/316L SS
(1) 40 Sq. Ft. Kontro Adjust-O-Film, SS constr., 20 HP
(1) 47 Sq. Ft. Artisan rising Film, Hast. "C"
(1) Approx 51 sq. ft. Pfaudler Wiped film, 316 SS, 100/85 & FV
(1) 80 Sq. Ft. Kontro Wiped Film Syst., SS constr., FV/150 psi, 40 HP
(1) UNUSED 85 sq. ft. Luwa thin film dryer horiz. 316 L wetted parts, FV int., 150 psi sat steam jkt.
(1) 141 Sq. Ft. Rodney Hunt Turbo-Film, 316 SS 15 psi int., 35 psi jkt 40 HP XP

BLENDERS

800 Cu. Ft. jktd. Dbl.Rbn., CS
Approx. 460 Cu. Ft. CS, 75HP
UNUSED 460 Cu. Ft. Marion Paddle, CS, 75 HP
400 Cu. Ft. J.H. Day Dbl. Ribbon Carbon Steel Contr. 40 HP (1)
300 Cu. Ft. CS Dbl. Cone 30 HP
200 Cu. Ft. KS 316SS Dbl. Cone
175 Cu. Ft. P-K Twin Shell, 316SS
150 Cu. Ft. J.H. Day Dbl. Ribbon Carbon Steel Contr. 25 HP (2)
69.3 Cu. Ft. CS Dbl. Cone, 7.5 HP
63 Cu. Ft. Marion Paddle, CS
60 Cu. Ft. 304 SS P-K, Twin Shell, w/int. bar
60 Cu. Ft. Gemco Dbl. Cone, 304SS
40 Cu. Ft. Gemco Twin Shell, SS Sant. Finish
37 Cu. Ft. Gemco SS
30 Cu. Ft. P-k, 304 SS, W/liq. bar.
20 Cu. Ft. P-K, Twin shell, SS
16 Cu. Ft. Robinson Dbl. Rbn. CS
15 Cu. Ft. WC Marion SS
10 Cu. Ft. Gemco dbl. cone, CS, 1½HP
10 Cu. Ft. P-K Sanit Twin Shell 1½HP
10 Cu. Ft. Howes, CS, Dbl. Rbn.
5 Cu. Ft., SS, Dbl. Cone W/liquid-solids bar
10" P-K zig zag
2 Cu. Ft. W.C. Twin Shell, mfg. P-K, SS constr., W/Pin int. bar

FILTERS

Pressure Leaf
1–562 Sq. Ft., 316ELC, *Hercules*, 28 leaves
1–512 Sq. Ft., 316SS, Niagara, 21 leaves
1–400 Sq. Ft. R/L Sparkler
1–327 Sq. Ft., 304SS, Ind. Filter, 11 leaves
1–320 Sq. Ft. Durco 316 SS, 11 Leaves
1–259 Sq. Ft. Pronto Mdl. #3259, 75 psig
1–200 Sq. Ft., SS, Hercules, Horiz.
1–191 Sq. Ft. Enzinger, SS, Vert., 75 psi
1 – 157.64 sq. Ft. Sparkler model 55-5-28, 316SS
1–150 Sq. Ft. Horiz., 12 Vert. Leaf 316SS
1–135 Sq. Ft. Ni, Bowser, Vert.
1–35 Sq. Ft. Hercules Model 5, 316 SS, horiz. tank vert leaves 50 psi
1-Sparkler Mdl.#18 D 12, SS const.
1-Sparkler Mdl.#18 D 4, constr.
1-Sparkler Mdl.#33S 28, constr.

Rotary Vacuum
1–56.5 Sq. Ft. KS, Inconel 600
1–56.5 Sq. Ft. K-S, 316SS, flexibelt disch.
1–87.92 Sq. Ft. Feinc, SS wetted parts, spring disch., 56" dia. x 6' face drum
1–132 Sq. Ft. Dorr Oliver, 304SS, maxibelt disch.
1–200 Sq. Ft. Elmco, 316SS, 8'x8'
4–250 Sq. Ft. D.O. 316L SS Precoat, 8" x10', sanit
1–250 Sq. Ft. K-S 316SS, coil disch.
1–300 Sq. Ft. Elmco, 316SS wetted parts, precoat type w/knife disch., 10" dia. x 10' drum, complt. w/control panel & aux. equipment
1–314 Sq. Ft. Elmco, precoat disch., 316SS
1–400 Sq. Ft. Elmco, CS, Precoat
1–500 Sq. Ft. Elmco, 316SS, belt disch.
1–3'x1' 316SS, knife disch.
1–3'x1' Dorr Oliver, FRP w/receiver & Nash H4 vac. pump, 10 HP
1–3'x 1' K-S comp. sys., 316 SS Flex-belt disch

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1–8' dia. x 50' Bartlett Snow Rotary Dryer, SS, 100 HP.
1–8' dia. x 50' *Louisville Steamtube* Rotary Dryer, SS clad, 40 HP.
1–11'6" x 70' lg. Bartlett Snow Calciner, 316SS, 1100°C., complete.
1–11'6" dia. C.E. Raymond Separator, single whizzer, CS constr.
1–24,000 Gal. Mix Tank, SS constr., 16' dia. x 16', 20 HP.
1–20,000 Gal. Storage Tank, SS constr., 16' dia. x 14'.
2–10,000 Gal. Storage Tank w/-jckt., SS constr., atmos. int., 150 psi jckt.
1–10,000 Gal. Mix Tank, SS constr., 13' dia. x 10', 30HP.
1–10,000 Gal. Mix Tank w/int. coils, 13' dia. x 10', 30 HP.
1–Marley NC Tower, 88"W. x 14'6" L. x 9'H.
1–1130 sq. ft. Micro-Pul Reverse Jet Dust Collector, CS constr.
*Large Quantity Silos. Many Screw Conveyors Available–various sizes, CS & SS construction.

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4,000 gal Pfaudler, 50/30 psi
3,700 gal Glascote, 50 & FV/90 psi
3,000 gal Glascote, 50 &FV/ 90 psi
3000 gal Pfaudler, 75/90 psi
2,000 gal Pfaudler, 75/90 psi
1,000 Gal. Pfaudler, 100&FV/90 psi, 4RW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4DW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4TW
800 Gal. SS clad, 60/60 psi
750 gal. DeDietrick, Phila drive
500 Gal. Pfaudler, 100&FV/85 psi, BH drive

Stainless Steel
4,000 Gal. 316SS, Atmos./50 psi, withcoils
3,000 Gal. 347SS Blaw Knox, 150/50 psi
2,500 Gal. 316L SS, 75/75 psi, 150 psi int. coils
2000 Gal. Nooter Autoclave, 316L 2000 psi, FV int. coils
2,000 Gal. Dusenberg, 316 SS, 15/35 & FV int., 50 psi jkt.
1,750 Gal. 316SS Nolte, 1467/50 psi
1,500 Gal. 304SS, 10 HP Lightnin
1,500 Gal. 304 SS, 100/30 psi
1,000 Gal. 304SS, 250/80 psi
1,000 Gal. 316SS, 50/75 psi jkt
1,000 Gal. 316 SS, 15 & FV/50, 10 HP
1,000 Gal. 316 SS, 100/30 10 HP
750 Gal. 316SS, 75 & FV/50 psi
750 Gal. 304SS, 50/60 psi
600 Gal. 316SS, 3000psi, 10 HP
600 Gal. SS, 50 psi, 1.5 HP XP
500 Gal. 316SS, 55 & FV/55 psi
450 SS, 50/75 psi
100 Gal. 316SS, 15/50 psi
100 Gal. 316ELC SS, 500/90 psi

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MIXERS

4.5 Gal. Kneader Master Cont., SS w/jkt.
5 Gal. AMK 304SS Jcktd. Kneader Extruder
15 Gal. W.C. Readco Sigma Blade Dbl. arm
25 gal. Readco DBL/Arm Sigma Blade jktd. SS construction 15 H.P.
80 Gal. Hockmeyer Pony, SS contacts, 7.5 HP varispeed
100 Gal., SS, Sigma Blade, Jcktd. 40 HP
200 gal. W-P CS dble arm Sigma blade, 20 HP
500 liter Welex hi intensity, SS contact parts
500 Gal. S-W Rubber Cement, CS, 2-10 HP motors (2)
Unused 1000 Gal. Sanitary 316SS B-K Dbl. Motion Change Can; 100&FV/165 PSI, 125HP
Littleford Model FKM-600D, SS
Littleford Model FKM-600S, SS
Littleford Model FKM-2000, SS, w/choppers
7 Cu. Ft. 304SS Nauta Model MBX-70
10.6 Cu. Ft. Nauta D-105, CS
Welding Eng. Model 2FV1V2S Twin screw Extruder, SS, Contacts, 150 psi
Koehring mdl. 350, 40 HP
NEW/NEVER USED 75/37.5 HP Hockmeyer Disperser

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ALWAYS BUYING & SELLING SURPLUS PLANTS & EQUIPMENT

AARON EQUIPMENT COMPANY

DIVISION ARECO, INCORPORATED
735 EAST GREEN STREET
P.O. BOX 80
BENSENVILLE, IL 60106

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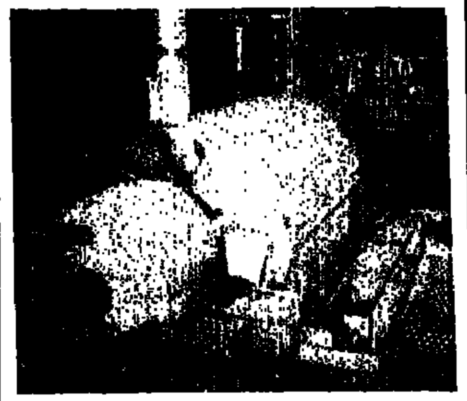
HAPPY HOLIDAYS: TO YOU AND YOURS • FROM EVERYONE AT AARON

LIQUIDATION SALE

LARGE POLYSTYRENE PLANT

ILLINOIS LOCATION

21899-Pfaudler Reactor, 1,500 gal., 316L SS dimple jkt.
21896-Pfaudler Reactor, 10,000 gal. 316L SS clad, 60 HP. (4)
21900-Pfaudler Reactor, 15,000 gal. 316L SS dimple jkt. (3)
21897-Metal Arts Corp. vessel, 17,000 gal. vert. 317L SS. (2)
21898-Brighton Corp. Tank, 12,000 gal. vert., solid 316L SS. (2)
21875-Bins, 176 cu. ft., S/S, cone bottom flat top. (4)
21891-Bins, 450 cu. ft., C/S, epoxy lined. (8)
21904-Bins, 450 cu. ft., C/S, epoxy lined. (6)
21905-Bins, 500 cu. ft., C/S, epoxy lined, flat top, conical bottom. (4)
21918-Worthington cent. pump, C/S, 15 HP, 200 GPM at 44 psig (2)
21916-Union Pump-Inline, C/S, mod. 4x6x8.5 VCK, 40 HP. (4)
21906-Edw Renneburg Rot. Dryer, S/S, steam heat, 10 HP. (4)
21881-Heaters, C/S steam, type BNF 2420 (8)
21914-Flotronics bin vent, filters, 122 sq. ft., 12 bags.
21889-Kelron Feeder twin screw, S/S mod. 5400-150 (4)
21901-Sparkler filter, 352 sq. ft. C/S, mod. VR-32-32.
21882-Screw conveyor, 304 SS, 7" dia. x 11L, 1.5 HP.
21888-Strong Scott Rib Blender, 25 cu. ft., 5 HP. (3)
21920-Welex extruder 6", 30:1 L/D, 400 HP.
21870-Welex extruder 8", 30:1 L/D, 600 HP.
21876-Conair pelletizer, S/S, mod. 1024, 40 HP. (2)
21874-Waterbath, S/S, portable. (4)
21887-Ross Static Mixer, 304SS, 3"x6 element. (4)
21917-Ingersol Rand pump, in-line pump, C/S, 30 HP.
21915-Goulds, C/S turbine pump, 200 HP. (2)
21913-Worthington cent. pump, S&S, 2 HP. (4)
21912-Union pump-Inline, S/S, 7.5 HP (2)
21910-Tank, 840 gal., flat top & bottom.
21920-Modern Welding Tank, 4800 gal. horiz. rubber lined.
21878-Gorman Rupp pump, centrifugal C/S, mod. 82EZ. (2)
21871-Prodex extruder 8", 30:1 L/D ratio, 600 HP.
21892-Buffalo blower, size 30, C/S, 10 HP (3)
21908-Buffalo exhaust fan, size 36, type B, 15 HP.
21880-Sutor Bill Blower, C/S, 40 HP. (4)
21922-Buffalo blower, type 40-3CB, 40 HP. (4)
21894-Buffalo blower, mod. 45-3CB, 75 HP. (3)
21883-Bird, 32x50 centrifuge, 80:1 gearbox. (2)



21883-Bird Centrifuge, 32x50, 80:1 gearbox.

21893-Environeering scrubber, mod. A33-14000
21895-Tank, 850 gal. vert. coal tar epoxy lined.
21911-Tank, 54000 gal. vert. C/S epoxy coated flat top/bot.
21903-Tank, 50,000 gal. vert. C/S epoxy, flat bot. conical top.
21902-Worthington compressor, mod. 4BB-2, vert. 125 psi. (2)
21879-Sweco sifter 60", mod. LS60S88, 2.5 HP.
21923-Kason sifter 60", mod. K60199, S/S, 1HP.
21884-Flotronics Cyclone mod. FTHEC370-T, 304 S/S 12" dia. dish top. (3)

ATTENTION: EAST COAST BUYERS!
61,000 gal. Tanks, T304SS, 18'dia.x32'H, flat top & bot., Chemineer Agit., mod 7HTD-20, 20 HP, 27 RPM. (4)

FILTER PRESSES

19846-Shriver P&F filter press, 12"x12" alum. plates, closed delivery, 23 chambers.
20534-Sperry Filter Press, 30", alumn.
20539-Sperry filter press 30", 35 Aluminum plates, 357 sq.
15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet closing.
15929-Shriver ALP, plate & frame, 18 36" x 36", S/S recessed plates.
19799-Clow/Bethlehem filter press, 36", recess plates, 25 chambers.
20076-Sperry filter press, 36", cast iron plates, closed deliv.
19462-Independent filter press, 42" x 42", polypropylene, 4 eye closed, 34 chambers.
20550-Sperry filter press, 42" Ehcl closer, 41 alum. plates.

CANADIAN BUYERS
LIQUIDATION–QUEBEC

22373-Reactor, 3500 gal. 8'x9'H, S/S clad, agit. dimple jacket.
22381-Reactor, 5000 gal. 10'x92"H, T316S clad, internal 330 lb., jkt 75 lb., agit 30 HP, vari speed. (2)
22379-Philadelphia, 7V63 agit drives, 10 HP, S/S (4)
22386-Siebtechnik H-400 centrifuge conturbex horz. screen, S/S, 20 HP.
22365-Climatrol water chiller LFV151172, 40 tons.
22385-Cyclone Sepeartor, 40" dia. x 2' plus 6" cone, S/S, Joy fan 15 HP.
22375-Sweco 30", 3 deck, S/S, ½ HP (2)
22387-Waukesha mod. 300, Sani pump, 6"x6", 15 HP.

FILTER-ROTARY VAC.

15826-FE, Inc. 36" dia x12", S/S, string disc., 1/2 HP.
17477-FE, Inc., 3' dia x 5', T316SS, belt disc., vac pump.
11177-Dorr Oliver S/S, 5' dia. x 6'L.
11653-Oliver T-316SS, precoat 5'3"x8'.
19431-K.S. flexibelt, 6' dia. x 8' face, 316SS.
18392-Eimco belt filter, 8'x10', steel drum, w/Nash pumps.
15827-Ametek, 8' dia.x14'0" face, maxi-belt, S/S.
17936-Eimco, 316SS, 10' dia. x 14', knife discharge.
17263-Impco belt filter, 12' dia. x 12', 304SS, Nash vacuum.
20251-K.S. T304, vacuum filter, 12' dia x 14', 304SS.
20323-Dorr Oliver 11'6"x16' face, S/S cont. parts.
11486-Eimco 10'x10' rotary vac. filter.

PRESSES

UNUSED Manesty Express, 10 ton, 20 stations.
11602-Colton Press mod. 260, 31 die stations, 1800 TAB.
21382-FJ Stokes rotary tablet, 15 station, 10 ton.
21418-Manesty rotary tablet, 16 station, 10 ton.
14425-Stokes Tab Press mod. #551, 51 station, 4 ton.
21417-FJ Stokes rotary, 27 station, 4 ton, double sided.
503881-Komerak Greaves, mdl. 75MSS briquetting press. 20.5" dia. x 4.5" face.
13392-Fitzpatrick Chilsonator, 50 HP, mdl. HA-50-30-210.
18802-Stokes single pucnh press, 900-530-1 (T4), 12 ton.
17224-Dorst compac., series TPA15, 20 tons.
10890-Stokes, mdl. R-4 press, 20 ton.

22215-Wilmes Bladder Press, S/S, 38" diz. x 9'9" long, horiz, 5 HP, unitized. (2)

DUST COLLECTORS

21125-Fabri-Jet jdl. SQ9-4B bin vent, 42 sq. ft.
16398-Mikro dust collector, S/S, 63 sq. ft., mdl. 9-6-100, pulse jet.
21153-EVO, bin vent, 72 sq. ft., S/S, 5 HP
20253-Unused EVO pulse jet collector, mdl. 84BF009C, 90 sq. ft.
21192-JH Day mdl. RJ-16RJ36, 125 sq. ft., CS, 3 HP.
21222-Fabri-Jet, mdl. SQ16-80, 151 sq. ft.
20398-Pulse jet collector, "FlexKleen," mdl. 58CT24 AV II w/175 sq. ft., cloth, C.S.
21286-Mikro dust collector, 285 sq. ft., S/S.
20256-Unused EVO Corp. pulse jet dust collector, mdl. 99BF030C, 350 sq. ft.
20255-Unused EVO Corp. dust collector, shaker type, mdl. MS049C10, 575 sq. ft.

SCREENS

21203-Sprout Waldron sifter, D10, 6 decks.
21150-Sprout Waldron, D10, 1 HP, 10 decks, S/S cont
21167-Sprout Waldron, D10, 2HP, 10 decks, S/S cont.

NEW SANITARY RIBBON MIXERS

(Available From Stock)
Quoted as standards, available with ASME code dimpleJackets
Quick shipment on:
14, 24, 36, 55, 80, 100, and 150 cu. ft. mixers,
Call Steve: (312) 350-2200

UNUSED CENTRIFUGES

21593-Sharples P5400 Sanitary Centrifuges w/200 HP motor, 25 HP backdrive, gearbox, 5" pitch conveyor, CIP, control panel (2) LATE MODEL

CENTRIFUGES

20827-Bird, 18"x24" steel, conical bowl.
20826-Bird, 24"x38" steel, con. bowl, gearbox.
20819-Bird, 24"x38", S/S, 15 degree, contour bowl.
20684-Bird 24"x60", H series, steel w/motor.
20364-Bird 32"x 50", SS T316 contour, 75HP.
12883-Bird 36"x96" contour, 10 deg., T317 ELC.
20137-Alfa Laval, NX 418-B31-60, 316SS, gearbox.
17308-Dorr Oliver, 304SS, Merco mdl. 16L, 30 HP.
13565-Sharples, mdl. P 600, gearbox, motor.
19767-Unused Sharples, 3 phase, P3000, S/S, carbide.
20407-Sharples P2000 316SS, 20 HP drive motor.
21359-Sharples P3000 w/gearbox.
20686-Sharples P3000, 52:1 gearbox, S/S casting.
21725-Sharples, P3400, S/S, gearbox & motor.
19249-Sharples, P5400, 316/317SS, 200 HP, gearbox.

CENT-BASKET VERT.

21408-Delaval 22"x16" perf. basket hyd. drive.
15815-Delaval Mark III, perf. basket, 40"x24", 316SS, 30 HP, hydr., drive.
19446-Sharples Sludge-Pak, SP-5500, 40"x24" basket centrifuge.

ROTARY VAC DRYER

22210–Bertrams, S/S 6'dia. x 12' dished heads, half pipe coil jacket 200 psi, 20/13 HP, unitized.

FILTER PRESSES

19846-Shriver P&F filter press, 12"x12" alum. plates, closed delivery, 23 chambers.
20534-Sperry Filter Press, 30", alumn.
20539-Sperry filter press 30", 35 Aluminum plates, 357 sq.
15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet closing.
15929-Shriver ALP, plate & frame, 18 36" x 36", S/S recessed plates.
20076-Sperry filter press, 36", cast iron plates, closed deliv.
19462-Independent filter press, 42" x 42", polypropylene, 4 eye closed, 34 chambers.
20550-Sperry filter press, 42" Ehcl closer, 41 alum. plates.

TANKS-S/S

22257-UNUSED Tank, 100 gal., T304SS, 30" dia., DH
22253-UNUSED Tank, 550 gal., T304SS, 4' OD, DH.
22256-UNUSED Tank, 1200 gal., T304SS, 5' dia. x7'H, DH.
21283-Tank, S/S vert., 1200 gal., 6' dia.x6', flat top & bot.
22255-UNUSED Tank, 1800 gal., T304SS, 6'6" dia. x 7'3"
22254-UNUSED Tank, 3,000 gal., T304SS, vac., 5'dia x 21'H, coil.
20651-Tank, SS, 9000 gal., agit., 12' dia. x 14'6" H.
20655-Tank, SS, 12000 gal., 12' dia. x 14', flat bottom, open top.
17043-Jos Oat horz. tank, 304SS, 16,000 gal., 12'6" dia. x 22'9½" long, 10 PSI.

REACTORS

20252-Unused Reactor, 600 gal., 304SS dimple jktd.
10138-Pfaudler, 800 gal., T-316 L SS, 55 PSI int/150 PSI.
20928-Brighton, 4000 gal., 8' dia. x 10', 316 ELC S/S
20458-Reactor, 4,000 gal., 316 S/S, 8' dia. x 7'9" st. side.
15475-Brighton, 4000 gal., 316SS, vacuum.
20287-GH Hicks, 4000 gal., 316 SS, pipe coil jkt.
20923-Richmnd Eng. Reactor, 4600 gal., T316 stain/clad.
Pfaudler 10,000 gal. reactors T316L, 100 psi int, 180 psi.
Pfaudler 15,000 gal. reactor T316L, 100 psi int., 200 psi jkt.

JUST PURCHASED

22489-Walter 750 gal. Reactor, 5' dia, dished heads, T 304 SS.
22435-Miell Mixer, 250 G. sigma, S/S, jkt., vac, 100 HP
22448-B.P. 100 gal. Sigma, S/S, tilt.
22447-Dyna Mill mod. KD200. horiz. (2)
22446-Pfaudler 30 gal. G/L reactor (2)
22439-B.P. 100 gal. Sigma, S/S
22440-B.P. 200 gal. Sigma, tilt.
22441-Pappenmeier 600 gal. Liter Mixer/Coller
22460-P.K. twin shell blender, 1 cu. ft. 325 lbs/cu. ft. L/S stainless, w/drives 5 HP bar, ¾ HP main.
22461-P.K. 1 cu. ft., S/S, 275 lb. density, 30 lb. jkt, vac., ¾ HP vari speed main, 2 HP bar.
22314-Sharples #16 Super Centrifuge S/S, 3 HP, cooling coils clarifier (22)
22351-Atlas Copco air compressor, 600 CFM @ 125 psi, 125 HP. (5)
22198-Gouda Flaker, 4'x4' stainless steel.
22199-Gouda Flaker, 4'x4' stainless steel.
22344-Christian ribbon mixer, 36 cu. ft. steel jacket. 7.5 HP, unitized.
22342-Sheet extrusion line, Prodex 4.5", 24:1 L/D, 50 HP, stheet die, chill roll stack, Famco shear.
22343-NRM Terret Winder, 48-46 w/2 adjusto speed motors, 1 HP
22346-Sheet Coater, 54" steam heated.
22344- Christian Ribbon Blender, 30 cu. ft., C/S dbl spiral Ribbon Inner & Outer
22449-Gemco 10 cu. ft. S/S, jkt. L/S processor
22491 Conair Water Chillers, 7.5 ton. (3)
22486 Conair mod. Plow-15 ton.
22498 Acrison mod .203-1052, 1½", 2½", 4" auger w/drives. (3)
22497-Sparkler mod. 18S11, T304 S/S
22489-Walter 750 gal. reactor, FV/100 lb., jkt. 40 lb. 30 HP vari dual motion.
22487-Walter 225 gal. reactor, FV/100 lb., jkt. 40 lb. 10 HP vari dual motion.
22453-Stokes mod. 280 F. 100 ton press.

MIXERS – PLOW

503755-Littleford, FKM 600D, SS jacketed, 25 HP.
20754-Littleford, FKM 3000D 65 CF, S/S, full jacket.
19214-New Plow Mixer, 80 cu. ft. 347SS, jacket, 100HP.
20829-Littleford FKM 4200D, S/S, 87 cu. ft. JKT.

MIXER RIBBON

21120-Ribbon Blender, S/S, 10 cu. ft., jkt. SS, 150 psi.
20276-Read ribbon blender, 14.7 cu. ft. 304SS, 3 HP.
20616-Unused Day, 316SS, 23 cu. ft., 5HP.
20189-Robinson, 25 cu. ft., S/S, jacket, 10 HP.
20985-Int'l 34 cu. ft. S/S dbl. ribbon, 5 HP. (4)
20212-Haas ribbon, 36 cu. ft., S/S, 15 HP.
19266-Ribbon Mix 80 cu. ft. T304 SS, 5 HP (4)
19566-Howe, 115 cu. ft., sanitary S/S, double spiral ribbon.
20983-Strong Scott blender, 130 cu. ft., 304SS, 25 XP gear motor.
21124-Ribbon Blender, 304SS jkt., 160 cu. ft., 30 HP.
20614-Unused JH Day ribbon, S/S 270 cu. ft., 25 HP.
21114-JH Day ribbon blender, S/S clad, 75 HP, 480 cu ft.

MIXER/EXTRUDER

21350-B.P. 500 gal. Sigma steel, jkt. 125 psi, 150 HP, Hyd. tilt

22352-Twin screw extruder (NA Bitruder Co), 65 mm, elect. heated, 20 HP DC, pellett die, vac pump used 100 hours
17654-AMK 25 gal. Mixttruder, Sigma, ST 7.5 HP.
18298-J.H. Day 25 gal. Dispersion, 25 HP vari main, 10 HP vari screw.
20996-AMK 30 gal. S/S, jkt. Sigma, 7.5 HP Main, 6 HP screw.
21334-Ross 40 gal., S/S hot oil jkt., Sigma 6" disch. screw.
19826-AMK 50 gal. ST, jkt., Sigma.
19421-AMK 75 gal. ST, jkt., Sigma, 10" disch. screw.
17136-AMK 120 gal., ST Sigma, 11.5" screw.
14832-AMK 150 gal., S/S, Sigma 15HP main, 10HP screw
19494-AMK 150 gal., S/S Sigma, 50 HP main, 10HP screw
20116-AMK 150 gal., ST, Sigma, 15 HP/10 HP
503527-New Aaron 300 gal., T304SS, mix extruder, Sigma, jkt., up to 200 HP main, 75 HP hyd. screw.
STILL INSTALLED . . . CALL NOW!

504528 - Aaron 300 gal. mixer/extruder T304SS, Sigma 150 HP, screw 75 HP hyd. jkt. 200 psi
Vac Cover, Excellent condition
Call Steve (312) 350 - 2200

UPE UNIVERSAL PROCESS EQUIPMENT, INC.

WE WANT TO BUY YOUR SURPLUS USED EQUIPMENT/PROCESSES/PLANTS

OVER 15,000 PIECES OF PROCESS EQUIPMENT IN STOCK...CALL TODAY!

LATEST ADDITIONS
SOUTHWESTERN LIQUIDATION
VESSELS–PRESSURE–316SS

GAL.	PSI	GAL.	PSI
14,000	30	5,800	30
13,000	60	5,600	69
11,000	30	3,400	30
7,000	30	3,200	103
6,400	50	900	352

OTHERS FROM 50 TO 1,000 GAL.

TANKS-316SS
36,000, 18,500, 13,500 (2), 12,000, & 6,600 GAL.
MANY FROM 100 TO 5,000 GAL.

HEAT EXCHANGERS–316SS
19,000, 9,600, 7,200, 3,560, 2,480, 1,035, 853, 705, 617, 614, 471, 350, 182, 125 SQ. FT.
5000 sq. ft. Monel

HEAT EXCHANGERS-TITANIUM
23,770, 18,000, 16,996, 14,409, 14,252, 8,987, 2,170, 1.470, 1,140, 300, 280, SQ. FT.

REACTORS–316SS
5,100 GAL. 350 PSI AGIT., 3,170 GAL. 359 PSI AGIT. (4)
CENTRIFUGAL PUMPS – 5 TO 100 HP 316SS (40)
HEATER–15MM BTU/HR THERMAL PRODUCTS GAS FIRED SKID MNTD. (2)
COMPRESSORS–1,240 CFM @ 110 PSI 250 HP (2)
220 CFM @ 215 PSI 150 HP (2)
AIR FIN COOLERS TO 80,440 SQ. FT. (6)
ALUMINUM BINS & SILOS TO 3,500 CU.FT.
COLUMNS-316SS–132"X110'X43 TRAY, 90"X35'X10 TRAY16"X33' PACKED 30 PSI (2)

2 VOTATORS model 24-072 Turba-Film Evaporators 35 sq. ft. 316 SS complete system

COMPLETE DRY TONER PLANT/POWDERED COATING PLANT

Complete Lines: Fine Grinding
Drying
Compounding
Packaging
Molding

★ UNUSED 7' Bowen Spray Dryer Complete with all accessories and structural steel
WE WILL SELL COMPLETE LINES.
CALL FOR DETAILS

I/Rand, XLE Air Compressors; 20½x 12½ x 8½ x 100 PSI 300 HP & 16 x 16 x7, 45 psi 200 HP Kemp Inert Gas Generator Mdl. DCV 75 L 75000 SCFH

VACUUM DRYERS
325 cu .ft. Abbe, 304 SS dbl. cone
200 cu .ft. 316SS, 6'6"x11'6", rotary
164 cu .ft. Paterson "Conaform," 316SS Dbl. cone
150 cu. ft. SS 304 SS Twin Shell
150 cu .ft. SS, & 150 cu.ft. Nickel clad
125 cu .ft. SS & CS, 4'x14', 105/90/150 psi
125 & 83 cu. ft. Buflovak SS Rotary
90, 70, 60, 50, 30, cu. ft. PK SS & G/L dbl cone
70 cu. ft. KS Titanium dbl. cone
40, & 15 cu.ft. Stokes, SS rotary

WE HAVE OVER 700 SS TANKS IN STOCK

2 INDUSTRIAL SITES–AVAILABLE IMMEDIATELY
Niagara Falls/New York Area
700,000 Sq. Ft. Buildings...50 acres of land
750,000 Sq. Ft. Buildings...35 acres of land
Plants manufactured Carbon Electrodes
Equipment Highlights:
5 Model 5057 Raymond Hi-Side Roller Mills in operation til Sept. 1986
40 Hi-Intensity CS jkt. mixers similar to Littleford's.
Electrical sub stations and switch gear
Dust Collectors and Material Handling Systems
Carbon Extrusion Extruders: 57", 40", 30" & 22"
84" Lathe...New in 1974.
14000 Ton United Hydraulic downstroke forging & forming press
Complete vertical Autoclave System...13' dia. x 26'4", 347 SS, 150 psi & 0.1 MM vac. & @ 700°F
Complete in plant railroad...flat cars/hopper cars/locomotive
UPE WILL SELL/RENT/LEASE COMPLETE FACILITIES OR SELL EQUIPMENT PIECEMEAL
CONTACT: RON GALE FOR DETAILS 609-443-4545

ALABAMA CHEMICAL PLANT
(3) 290 cu. ft. 316 SS rotary vac dryer systems 10'x 14' Elmco rotary vac filter
(2) Niagara 36 H 190 filters SS
NASH H9 vac pump w/fuller V 300 booster
Reactors: (4) 3000 gal. 316 SS 60/30 HP agit w/coils 100 psi
(1) 3000 gal. 316 SS 30 HP, 6TW, 300psi coils
(2) 2000 gal. 316 L SS, 75/200 psi jkt
Tanks: 15000 gal. 316 L SS agit.
5500, gal. (3) 3000, 2200 gal. Monel vertical
4000 gal. G/L Pfaudler Chemstor 30 psi
SS Heat Exchangers from 100 to 500 sq. ft. plus many misc. items.

GLASS • GLASS • GLASS REACTORS
5,000 GAL. DEDIETRICH 100FV/90 REGLASSED
4,000 GAL. DEDIETRICH 100/90 PSI
3,000 GAL. DEDIETRICH, 100/90, PHILA. DRIVE
3,000 GAL. RA SERIES, 100/90 TW, REGLASSED(2)
2,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. E SERIES 25/90 (4)
750 GAL. 25/90 TW, (2)
500 GAL. RA SERIES, 100/90, TW
400 GAL. E, SERIES, 25/90, TW
300 GAL. E, SERIES, 25/90, TW
200 GAL. E, SERIES, 25/90 REGLASSED, TW
100 GAL. E, SERIES, 25/90, TW
OVER 100 GLASS LINED REACTORS IN STOCK

GLASS LINED TANKS
FROM 5-22,000 GALLONS
TRAILER LOADS OF GLASS LINED PARTS AVAILABLE
• LOU FALCONE–OUR G/L SPECIALIST WITH 21 YRS. EXPERIENCE IS HERE TO HELP YOU! •

STAINLESS STEEL REACTORS
20,000 GAL. 304SS, 40 & FV
9,000 GAL. 304 SS, 50/5 PSI
8,500 GAL. INCONEL, 40/60 PSI AGIT.
6,000 GAL. 304SS, 100/15 PSI
4,200 GAL. 316 ELC, 50FV/50 PSI
3,000 GAL. 316 ELC, 75 FV/150 PSI
2,800 GAL. 304LSS, 25FV/100 PSI
2,500 GAL. 316 SS 1,000/100PSI (2)
1,300 GAL. 316SS, 150FV/125 PSI
1,000 GAL. 316ELC 100FV/90 PSI
800 GAL. 316SS, 140FV/50 PSI (3)
750 GAL. 316 ELC, 180FV/140 PSI
500 GAL. INCONEL, 50 FV/50 PSI
400 GAL. HAST C., 210 FV/160 PSI

• TWO LARGE LIQUIDATIONS •
48"x24" TOLHURST SS "BATCHMATIC" CENTRIFUGE (6) COMPLETE ... LATE MODEL
18" DIA. SS BAKER PERKINS TERMEER PUSHER CENTRIFUGE
60"x40' JEFFREY SS CONTINUOUS FLUID BED DRYER (2)
60"x20' JEFFREY SS FLUID BED DRYER
6'6x40' FULLER CS ROTARY DRYER, 50 HP
6'6x32' CS COUNTER-CURRENT ROTARY DRYER
ST REGIS 3-STATION BAGGER MDL. 18-VC-3
54" DIA. DUCON 304SS SCRUBBER TYPE L
- - - - -
3-95 CU. FT. DAY SANITARY SS RIBBON BLENDERS, 15 HP
1-43 CU. FT. DAY SANITARY SS RIBBON BLENDER
1-8'x12'SS, K-S PRECOAT ROTARY VACUUM FILTER
1-1'x3' K-S PRECOAT ROTARY VACUUM FILTER ... COMPLETE WITH ALL ACCESSORIES
1-7' DIA. BOWEN SPRAY DRYER ... COMPLETE WITH ALL ACCESSORIES
THIS IS A PARTIAL LISTING MANY MORE ITEMS AVAILABLE

CALL NOW ABOUT GIANT RHODE ISLAND & NEW JERSEY LIQUIDATION MOST EQUIPMENT STILL INSTALLED
(89) Glass lined & SS Reactor systems complete with condenser, receivers and control panels. from 50 gal. to 4000 gal.
(30) Filter Presses polypro & SS from 18" to 56" plate/ frame & recessed plates.
(25) Vacuum dryer systems complete with condensers, vacuum pumps and receivers.
Double Cone: glass & SS.
Rotary Vacuum Dryers 316 SS
Vacuum Shelf Dryers SS and Heresite lined.
(18) Centrifuges 316 SS automatic basket centrifuges complete with controls and nitrogen purge
Scrubber systems/Vacuum filter systems/Glass lined and SS tank farms.
MUCH MORE ! ! !
30,000 Gal. 1974 Propane Tank 250 PSI
10,000 Gal. 347 SS Tanks (3)

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KETTLES–REACTORS, SS

30,000 gal. 304SS fermentors, 14' x 24', 25 psi/vac., coils, 200 HP agit. (4)
6,000 gal. 304SS, atm. int., 75 psi jkt., agit.
4,100 gal. 304SS kettle, 16 psi jkt., 5 HP agit.
3,500 gal. 316SS kettle, 20 psi jkt., 7½ HP agit. (2)
2,500 gal. 304SS reactor, 75 psi/FV int., 180 psi jkt.
1,600 gal. 304SS kettles, jktd., 5 HP agit. (3)
1,500 gal. Pfaudler 316 SS reactor, FV/180 psi, 5 HP Agit. (2)
1,150 gal. 304SS reactor, 15 psi int., 25 psi jkt., 5 HP agit.
900 gal. 304SS reactor, 75 psi/FV int., 150 psi jkt., agit.
600 gal. 304SS reactor, 300 psi int., 75 psi jkt., coils (3)
500 gal. 304SS reactor, 150 psi int., 150 psi jkt., 5 HP agit.
300 gal. 316SS reactor, 75 psi/FV int., 60 psi jkt.
(50)... 316SS and 304SS reactors and kettles from 5 gallon to 400 gallon... call for list.

BIG PFAUDLER 316SS REACTORS

(3) 15,000 gal. Pfaudler, 316SS, 12'6"x 15', 100 psi, 200 psi jkt. Agit.
(4) 10,000 gal. Pfaudler, 316SS, 11'6"x 12'4", 100 psi, 100 psi, jkt. Agit.

REACTORS–GLASS

2 gal. Pfaudler, 750 psi/FV, 700 psi jkt.
20 gal. Pfaudler, 35 psi, 100 psi jkt., agit. (2)
30 gal. Pfaudler, jktd.
50 gal. Pfaudler, 25 psi, 100 psi jkt.
50 gal. Pfaudler, 100 psi/vac., 85 psi jkt., agit., 1975
100 gal. Pfaudler, 25 psi, 90 psi jkt., agit.
150 gal. Pfaudler, 25 psi/vac., 90 psi jkt., agit.
300 gal. Glascote, 25 psi/vac., 90 psi jkt.
500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., vari-drive agit.
500 gal. DeDietrich, 65 psi/vac., 105 psi jkt., 5 HP agit.
750 gal. Pfaudler, 25 psi, 85 psi jkt., 5 TW agit.
1,000 gal. Pfaudler, 100 psi, 90 psi jkt.
1,000 gal. Pfaudler, 75 psi/vac., 90 psi jkt., 10 HP agit.
1,500 gal. DeDietrich, 100 psi/vac., 90 psi jkt., 1981,
1,500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 25 HP agit.
2,000 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 15 HP agit.
2,500 gal. Pfaudler, 150 psi, 90 psi jkt., #TW6 agit.

LIQUIDATION! CHEMICAL/POLYMER PLANT....ILLINOIS ..BUY BEFORE REMOVAL AND SAVE!!

Bird 32"x 50", centrifuges, 316SS, contour (2)
Welex 8" Extruder, 700 HP, 30:1 L/D (5)
Welex 6" Extruder, 400 HP, 30:1 L/D (2)
Conair 24" pelletizer, 40 HP (2)
Renneberg 5'x 25' 304 SS rot. hot air dryers, 10 HP, (3)
Sweco & Kason 60" screens, SS (2)
K-Tron 7000#/hr. twin screw volumetric feeder, SS, (5)
Pfaudler 1,500 gal. 316L SS reactor, FV/-180 psi' 5 HP agit. (2)
Pfaudler 10,000 gal. 316L SS reactor, 150 si/FV int., 180 psi jkt., hyd agit (4)
Worth. Plant air comp., 323 CFM @ 125 psi, 75 HP, Model #4-BB-2 (2)
17,000 gal. & 12,000 gal. 316 SS Tanks (3)

PHONE (609) 267-1600

DRYERS

Nooter 4' x 14' rot. vac., 316SS, 1982, NEW (3)
Blaw Knox 6'4"x 40' SS vac. dryer, 600 cu. ft.
Blaw Knox 36"x 20' vac. dryer 316L SS, 72 cu. ft.
Blaw Knox 66"x 36' vac. dryer, nickel
Mathis 24"x48" flaker, chrome plated
Sandvik 48"x24' SS belt flaker, UNUSED
Sargent 60" x 45' SS conveyor dryer
Blaw Knox 32" x 90" dbl. drum
Aeromatic #ST-5 fluid bed dryer, 5/10 KG
Witte 36" x 10' fluid bed, SS, sanit.-cooler
Renneberg 36" x 20" rotary dryer, 316 SS
96" x 50' Louisville SS rotary dryer
10"x 100' GATX rot. steam tube dryers, 140 psi (4)
Wyssmont #VTL-24 Turbo-tray dryer, 304SS
P-K 5 cu. ft. vac. dryer, 304SS
P-K 20 cu. ft. vac. dryer, 304L SS (2)
Abbe 30 cu. ft. 304SS vac. dryer
Devine 110 cu. ft. 304 SS vac. dryer
Pfaudler 165 cu. ft. glass-steel vac. dryers (2)
Abbe 325 cu. ft. 316SS vac. dryer
Devine 370 cu. ft. 316SS vac. dryer
Devine 564 sq. ft. vac. shelf dryer
Niro 30" SS spray dryer
Bowen 72" spray dryer, SS
Bowen 96" spray dryer, SS

FILTERS–VACUUM

36" x 1' Dorr-Oliver, fiber glass 9 sq. ft.
36" x 1' Ametek, 316 SS, 9 sq. ft.
40" x 3' Bird-Young, SS, 48 sq. ft.
4' x 16' Elmco, 316SS, 64 sq. ft., horiz.
6' x 3' Ametek, SS, 55 sq. ft.
6' x 4' Elmco, "Elmcomet" polypropylene, UNUSED
8' x 8' Elmco, SS, 200 sq. ft., precoat
8' x 10' Dorr–Oliver, 250 sq. ft., 316SS, precoat
8' x 12' Elmco, 316SS, precoat, 300 sq. ft., (3)
8' x 14' Dorr–Oliver, 316SS, precoat, 350 sq. ft. (2)
10' x 10' Elmco, 316SS, precoat, 314 sq. ft.
11'6"x 16' Elmco, SS contacts
12' x 14' Komline, 304SS, 525 sq. ft., flexibelt disch. (2)

FILTERS–PRESSURE

54 sq. ft. Funda, SS, jktd.
65 sq. ft. Artisan "Dynamic" filter/washer, SS (2)
140 sq. ft. Niagara # 36-140 316 SS (2)
310 sq. ft. Niagara #310-22, 316SS (4)
600 sq. ft. U.S. Autojet, 316SS, sanit.
1000 sq. ft. U.S. Autojet #1000, 304SS
36" Shriver filter press, 546 sq. ft., hydraulic
42" Shriver filter press, 777 sq. ft., hydraulic
48" Shriver ALP recessed filter press, SS, 276 sq. ft.
48" Poly Filter Co. polypropylene filter press, 2094 sq. ft., 87 cu. ft. cake, 1983

PULVERIZERS

Mikro #4TH pulv., 125 HP, UNUSED (15)
Mikro #5MA atomizer, 5 HP
Mikro #6MA atomizer, SS
Pallman #REF8 pulv., 100 HP
Pallman #PP8 pulv., 50/75 HP
Abbe porcelain pebble mills... 36"x42", 36"x48", 42"x60", 48"x60", 60"x48" (7)
Raymond #6056 Hi-side roller mills, dbl. whizzer (2)
Raymond #73612 Hi-side roller mill, dbl. whizzer

NEW LIQUIDATION... CHEMICAL PLANT...GARFIELD, N.J.

(4) 316SS packed columns; 16" x 15'; 20" x 12'; 36" x 23'; 36" x 40'
(1) 36" x 48' Glitch 316L SS column, 24 trays
(1) 48" dia. x 60' high SS tray column
(1) 60" x 60' Glitch 304L SS column, 60 trays, FV/75 psi
(1) 72" x 39' high SS column, 11 tray
(1) 78" dia. x 43' high Nooter SS column, jacketed, 25 psi/FV 150 psi jkt., 20 trays
(6) Niagara Aero heat exchangers, SS contacts
(21) Shell and tube heat exchangers, 316 SS and 304 SS: 12, 41, 92, 213, 297, 300, 320, 393, 400 (2) 431, 460, 522, 524, 527, (4) 600, 1050, 1300 sq.ft.
(3) Niagara SS leaf filters; 75, 69 sq. ft.
(1) Mikro pulverizer #2TH, SS
(3) Patterson 200 gal. SS Sigma blade mixers, jktd., vac. cover, bottom disch., 20 HP
(1) Porter 62 cu.ft. 304 SS dbl. cone blender
(1) 8000 gal. 316L SS tank, 9' x 16', horiz., coils
(1) 6000 gal. 316L SS vert. tank, 7' x 21', 60 psi WP, coils
(2) 4500 gal. 316 SS tanks, 7'6" x 13', agit.
(1) 1800 gal. 316L SS tank/still, 6' x 8', w/coils
(1) 1500 gal. 316L SS tank, 5'6" x 6', horiz., w/coils
(8) 316 SS and 304 SS tanks: 1200, 1100, 500 (2), 250, 200, 100 gal.
(6) 3000 gal. vert. steel tanks, 8' x 9'
(1) Industrial filter dual unit dionization system, #3653P6A, Type 288, W/(2) 316L SS columns, 316 SS exchanger and tank, controls, etc... built 1979.
ALSO – SS pumps; (9) rubber-lined tanks on scales to 7500 gal; Rotoclone SS collector; blower; etc.

Over (50) Bird & Sharples decanters

CENTRIFUGES

Sharples P-5400 D–Canter, 316SS, Carbide tiles, late (2)
Sharples P–3400 D–canter, 316SS, tiles (2)
Sharples P–5000 D-canter, 316SS
Sharples P-660 D–canter, 316SS, back drive
Bird 12" x 30", 316SS, Decanter, 20 HP
Bird 18" x 28", 316SS, Decanter (3)
Bird 18" x 42" Decanter, steel, 10/30
Bird 24" x 38" Decanter, 304SS, contour-10
Bird 24" x 38" Decanter, 316SS, contour (3)
Bird 24" x 60" Decanter, steel
Bird 24" x 86" Decanter, SS, 125 HP
Bird 24"x 96" decanter, 304SS, carbide tiles, 1981, UNUSED (3)
Bird 32" x 50" Decanter, Monel, contour (2)
Bird 32" x 50" Decanter, 304SS, contour
DeLaval NX214-31B Decanter, 304SS, 20 HP (2)
Sharples AS16V "Super," SS (5)
Sharples AS26V "Super," SS
DeLaval BRPX-213-30, 316SS separator/desludgers (3)
Westfalia SAMN15037, Desludger/Separator, 316SS
Westfalia SA14-35-076 3-way separator, 316SS
Krupp 10" pusher, 316SS, 15 HP
Baker-Perkins 19" pusher, 304SS, 40 HP
Sharples 48" T-1600 auto-basket, 100 HP
Tolhurst 48" Batchmaster, rubber lined, 30 HP
Sharples 48" Tornado-Matic, SS, 25 HP
Delaval 48" Mark 111, 316SS hyd.
CENTRIFUGE PARTS... Sharples, Bird, DeLaval, etc.

EVAPORATORS

2.4 sq. ft. Rodney-Hunt SS, 3 HP
21 sq. ft. Rodney-Hunt Turbafilm #4, SS
87 sq. ft. Rodney-Hunt, 304 SS, Turbafilm
100 sq. ft. Pfaudler, 316L SS, wiped film
600 sq. ft. Goslin-Birmingham dbl. effect, SS
854 sq. ft. Buflovak dbl. effect, SS
1688 sq. ft. Roger dbl. effect, SS
Swenson 316SS cntinuous crystallizer, 9" x 14'

TANKS & VESSELS

30,000 gal., 304SS, 14' x 24', coils, 200 HP agit. (4)
20,000 gal., 304SS, 12' x 24' (2)
17,000 gal., 304SS, 11' x 24' (3
17,000 gal., 316LSS, 14'x 13', Agit. (2)
12,000 gal., 316LSS, 12'x 14', Agit. (5)
10,500 gal., 316L SS, 8' x 25'
10,400 gal., 304SS, 10'6" x 16', agit.
8,000 gal., 304SS, 10'6" x 12'
5,000 gal., 304SS, 9'x9', 25 HP agit.
3,500 gal., 304SS, 8'x9'
3,000 gal., 304SS, 7'x 10', agit.

MIXERS, BLENDERS

3.5 cu. ft. Henschel #FM15D, 17/20 KW
11.5 cu. ft. Henschel #115JSS, 92/46 HP
13.7 cu. ft. Lodige #W600/K1200, mix/cool comb.
20 cu. ft. P-K twin shell SS
33 cu. ft. Abbe high intensity, SS, 40/20 HP
35 cu. ft. Day Nauta, #NBX350, SS
43 cu. ft. Littleford #FKM2000E, SS, Choppers
52 cu. ft. Nauta 304SS mixer (2)
60 cu. ft. Gemco ,TW SH, Sanit, SS
69 cu. ft. Patterson dbl. cone, SS
70 cu. ft. Day Nauta, #NB700, 10 HP
75 cu. ft. Day Nauta, SS, jktd.
75 cu. ft. Robinson SS ribbon blender, jktd.
98 cu. ft. Day Nauta, SS, 1981
110 cu. ft. J.H. Day, dbl. ribbon, 316SS
120 cu. ft. Cleveland ribbon blenders (6)
144 cu. ft. 304SS dbl. ribbon blender, 30 HP
169 cu. ft. Pfaudler; dbl. cone, glass steel jktd., vacuum
200 cu. ft. Young, ribbon, SS

NEW LIQUIDATION

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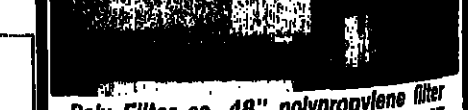
BALERS, Dispozapak #D600 balers, (2)
BAG PACKER, Howe-Richardson #G-S-17 semi-automatic bagging system SS contacts
BINS, 304L SS contacts, 1300 cu.ft./9720 gal.
CENTRIFUGE, Bird 24"x96", 304SS, Model 15 solid bowl continuous, 10 deg. contour bowl, Tungsten carbide tiles on conveyor, 150 HP
CHLORINATION SYSTEM, Wallace & Tiernan
COLUMN, 46" dia. x 15'9", 304SS
CYCLONE, DuCon Model 700/175 304SS high efficiency cyclones, size 210, Type VM (8)
DRYERS, Nooter 4' x 14' rotary vac. dryer, 316L SS shell and jacket, Incoloy ribbon agit. ASME 100 psi/FV int. & jacket, 100 HP
DUST COLLECTORS, EVO reverse pulse, 100 320, 640 sq. ft. (4)
FURNACE, C-E Air Co. "Cor-Pak" thermo oxydizers, direct gas fired
MIXER, Air mix blender system, Koppers-Sprout Waldron #36-50, 500 cu.ft., 304SS
MIXERS, Webb, 59" W x 15'L twin shaft paddle mixers or pug mills, 304SS contacts, (2)
PULVERIZERS, Mikro #4TH pulverizers, 125 HP drive, (15)

[illegible] COMPOUNDING PLANT [illegible], N.J. [illegible]

(2) Munson 300 cu.ft. blenders, 104" dia., #TS-300GB, pkgd.
(1) Munson 110 cu.ft. blender, 90" dia., #700/110, pkgd.
(2) Munson 90 cu.ft. blenders, 80" dia., #7TS90, pkgd.
(2) 400 cu.ft. Gruendler ribbon blenders
(2) 215 cu.ft. Cleveland ribbon blenders
(2) Eirich 10' dia. intensive mix mullers, motorized pan and mullers
(2) Komline dbl. cone blenders; 320 cu.ft. (10' dia.), 69 cu.ft. (6' dia.)
(3) Gruendler hammermills, 150 HP, 1980
(2) Gruendler hammermills, 100 HP, 60 HP
(1) Mikro #8D atomizer pulverizer, 30 HP
(1) Mikro #4TH pulverizer, 50 HP
(2) Saw tooth brakers/crushers
(2) St. Regis baggers
(1) "Push-Pull" railcar unloading system
(25) Flexkleen, Dustex, etc., bag type dust collectors
(2) Box sifters
(1) Handling system w/(2) 2000 lbs. elevators, 80' powered roller conveyor, etc.
ALSO...laboratory with lab apparatus, tables, equipment, etc.; motor control center units; Gardner-Denver air compressor; etc., etc.



Poly Filter co. 48" polypropylene filter press, (100) chambers, 2094 sq. ft., 87 cu. ft. cake, hydraulic...1983, CALL!

JUST PURCHASED!...(9) Patterson & Abbe batch ball mills & pebble mill, varous sizes... CALL!

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PATTERSON KELLEY Lab, 5 & 10 cu ft. & 12" SS Zig Zag
AMF "Glen" 340, 160 & 120 Qt Vertical
FALCON M500A 7 cu ft. SS -sanitary
HOBART V1401 (140 qt.) 80 & 60 qt. Vertical
DAY MBX350 "Nauta" 35 cu. ft. SS
HOCKMEYER Big "H" 60 & 80 Gal SS Pony
OAKES 10M & 14M Slurry
DAY, B.P. & ABBE SS Jacketed Lab. 1 Qt. to 5 Gal.
BRAMLEY 25 & 50 Gal. SS Double Arm Duplex
GIRDLER, 1, 2 & 3 Tube Votators
LEE & GROEN SS Cooking & Mixing Kettles 10 to 200 Gal.
CREPACO & CHERRY BURRELL SS Jacketed Processors 100 to 1000 Gal.
CHARLOTTE & TRI HOMO Colloid Mills
GIFFORD WOOD & EPPENBACH HOMOMIXERS

PULVERIZERS
MIKRO "Bantam," ISH, 2TH, 3TH, & 4TH SS
FITZPATRICK DAS06 & D6 Comminutors
FITZPATRICK GC Guillocutters, J Homoloid Mills, CS-31 Prebreaker & L Melaxator
RIETZ RE6K & RE12K SS Extructors
RIETZ RP12 Disintegrator
STRONG SCOTT SS Turbulizer
URSCHEL MG1700 & MG1300 Commitrols
STOKES "Tornado Mill"
QUADRO Comomill
PALLMAN, RAYMOND, SCHUTZ-O'NEILL, MOREHOUSE, BAUERMEISTER & ALPINE Grinders
DAY & LEHMANN 3 & 5 Roll Mills
PREMIER 5 HP Variable Speed Dispersator

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PELLIGRINI T600 SS Coating Pan
MERILL 88-14 Tablet Counter

FILLERS
MATEER 34B HiSpeed Auger
COZZOLI LF840 8 Piston Automatic SS
PNEUMATIC 30, 24, 16 & 8 Head Rotary SS
MRM, HORIX & KIEFER 30, 24, 16, 12 & 8 Head Rotary
ELGIN & HOPE 2, 4 & 8 Piston
MATEER 31A, 33A & 37 A Auger
ARENCO GAB, KALIX & COTUPLAS Tube
FILAMATIC DAB, AB4
mG2 & ZANASI Capsule Fillers
PERRY Accofil
BURSA F3 & BOCK Fillers
NALBACH High Speed Power Filling Line

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CANCO, CONTINENTAL & ANGELUS Can Seamers
RESINA FW Rectangular Spice Fitment Applicator

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TEKNIKA, SHARPLES & INTERNATIONAL Centrifuges
FITZPATRICK FA150 SS Fluid Bed Dryer
WAUKESHA, MOJONNIER & CP SS Pumps

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-Baker Perkins 150 gal. C/S jktd. vac. flusher
-Devine 100 cu. ft. Dbl. Cone Blender, C/S
-J.H. Day 23 cu. ft. SS Ribbon Blender
-J.H. Day 40 cu. ft. CS Ribbon Blender (3)
-Nauta Mixer 70 cu. ft. SS 10HP (2)
-Patterson Kelley 1 cu. ft. Twin Shell SS 500 lb. Dens.
-Patterson Kelley 30 cu. ft. Twin Shell Blender
-Patterson Kelley 40 cu. ft. Twin Shell Blender
-Patterson Kelley 1500 cu. ft. C/S Blender 75HP
-Patterson Kelley 4 qt. SS Twin Shell/liq. solids
-Paul O. Abbe 90 cu. ft. SS/sanit. jktd. vac. Blender 50HP
-Readco Sigma Blade Mixer 10 gal. SS Dual Level (Like New)
-Ross 10 gal. Planetary Mixer SS
-Ross 15 gal. SS jktd mixtruder 7½ HP mdl. AMK 15
-Strong-Scott 200 cu. ft. C/S Ribbon Blender

FILTERS

-Bird (Pannevis) Filter SS, 12"W x 17'L
-Elmco 4'x12' Vac. Belt Filter 316 SS
-Enzinger Leaf Filter SS 360 sq. ft.
-Evirex SS Rotary Filters 6 x 6
-Funda Filter 4' dia., SS, jktd. w/20HP Drive
-Hercules Filter 500 sq. ft. 316 SS
-Industrial Filter 100 sq. ft. Type 122 ID 21 MDL OMD
-Shriver 36" ALP 316 SS, 41, 48 Cham (2)
-Sparkler Filter MDL #18 D-4 SS jkt/SS 8-6
-Sperry 42" Plypro Filter Press 48 Chambers
-Star SS Filter Presses 18" (5)
-US Autojet Filter SS 50 & 750 sq. ft.

DRYERS

-Abbe 20 cu. ft. SS Conical Vac. Dryer
-Aeromatic Fluid Bed Dryer Lab. MDL-15/100 ST
-Bowen Spray Dryers 7½' & 5' SS
-Fitzpatrick Fluid Bed Dryer SS Lab MDL #75
-Gemco Dbl. Cone vac Dryer 10 cu. ft. SS
-Jeffery Fluid Bed Dryers 2'x20' SS (2)
-Patterson Kelley Twin Shell 1&3 cu. ft. vac. processor SS
-Patterson Kelley Twin Shell vac. Dryer 75 cu. ft.
-Patterson Kelley 5 cu. ft. SS Conical Vac Dryer.
-Pfaudler Conical vac. Dryer G/L 72 cu. ft. compl. sys.
-Standard Hersey 4'x30' Rotary Dryer SS
-Stokes 6'x30' Rotary Vac. Dryer, jktd., SS
-Stokes Vac. Shelf Dryers 48.9 sq. ft. (7)
-Strong Scott Rotary Vac. Dryer SS 3'x12' Solidaire

NEW ARRIVALS

-Chemetron Heat Exchanger Scrape Wall 9 sq. ft.
-Chromolox Hot Oil Heaters 20 & 40 KW & 80 K.W. complete system UNUSED
-Patterson 3'x4' jkt. Ball-Mill
-Mateer Filler Model No. 33A Auger Type, SS/sanit
-Autoclave 200 gal. SS 115/350
Artisan 1 sq. ft. wiped film evaporator SS complete system
-Alpine Sieve Model # A-32-100 LS
-Micro Atomizer SS 5HP XP Mdl. #5MA
-Ross 2 gal Planetary Mixer Model # 130 ELS/S jkt bowl

PAINT PLANT LIQUIDATIONS

-Abbe 12"x18" steel, jktd., lab ball mill
-Cowles Dissolver, 50/40/30/10½/1 HP
-10HP, Dissolver, vari speed
-5HP, Dissolver, straight speed
-30HP, Hill Homo Mixer
-Kady Mill, 100 gal, ss, jktd., 30HP
-Ross 3 Roll Mill, lab, 4½" x 10", 4"x8"
-Various Fixed Mount Dissolvers (10)
-Reitz disintegrator SS 5HP
-Schold Shot Mill 304 SS jktd. 100HP (2)

CENTRIFUGES

-Bird Centrifuge C/S 40"x60" Solid Bowl
-Bird Centrifuge C/S 18"x28" Contour Bowl
-Bird 38"x50" 347SS Contour Bowl
-Sharples 12" SS Lab Model/Brighton Lab
-Sharples P-800/3000/5000 Decanter SS
-Sharples Centrifuge 12" SS solid bowl w/skimmer (2)
-Tolhurst Centrifuge 26" SS perf. basket

GRINDERS & MILLS

-Alpine Sieve Model #A-32-100 LS
-Cumberland Grinder Size 14
-Entoleter Comptact Mill, Type EIM, SS, 30HP
-Fitzmill Model #D-6/DSAO/12, 30 HP SS
-Greerco Colloid Mill, 3HP & 5HP
-Micro Pulverizer 4 TH (3)
-Rotex Screener 2'x4'/1'x3'
-Simpson Mueller 6"x6" size 2 VD mixer 20HP
-Sweco Separator 48"/30"/24"/18" SS

REACTORS

-4000 gal. 316 SS reactor 90/500 psi half pipe jacket (4)
-Norwalk 3000 & 750 gal. SS reactor dimple jktd FV/50
-Pfaudler 9200 gal G/L Reactor 90/90 psi Unused
-Downington 1500 gal. Monel Clad reactor 55/70 psi
-13,500 gal. 304 Elc Dim., Jktd, Reactor, 30/100 psi
-Pfaudler 500 gal. G/L jktd. vac. reactor

J. Little Mercer Co., Inc.
254 Hornbine Rd., Rehoboth, MA 02769 617-679-1901

RAYMOND

PULVERIZING MILLS
Immediate Shipment
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Wabash Power Equipment Company
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Phone 312/541-5600 TELEX 28-2556

UNUSED PATTERSON-KELLEY twin shell blender, 1 cu. ft., 316 S/S, liquid-solids bar, UNUSED.
PATTERSON-KELLEY "V", 1 cu. ft., S/S, 550 lbs.
BUFFALO 6"x7½" dble. drum dryer, chrome plated.
THROPP 6"x12" two roll mill, 7½ HP.
KENT 4"X8" three roll mill, ¾ HP XP.
HOCKEMEYER 10 HP disperser, X P, VS.
STANDARD METALS model JI 600 bottle cleaner.
KALIX model KX60 tube filler, S/S, agit. hopper..
CHERRY BURRELL S/S oscillating granulator.
CHROMALOX 100KW water-glycol heat transfer sys.

STUART EQUIPMENT CO.
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312-473-4500

NEW LIQUIDATION
BAUXITE PLANT ... ARKANSAS LOCATION
NEW EQUIPMENT

4 x 40' Bartlett-Snow Rotary Kiln
3' x 20' Bartlett-Snow Rotary Kiln
3' x 20' Bartlett-Snow Rotary Dryer
M-400 (16") Bird Pusher Centrifuge, 316 S/S (2)
18" Bird Horizontal Screen Bowl Centrifuge, 316 S/S
12' x 15' Jeffrey Fluid Bed Dryer, S/S
60" Wide Proctor & Schwartz Belt Dryer
Marley Cooling Tower
Multi-Stage Evaporator System

USED EQUIPMENT

9'6" x 250' Traylor Rotary Kilns (8)
8'3" x 43' Traylor Rotary Coolers (6)
6' x 40' Allis-Chalmers Rotary Coolers (6)
8' x 16' Traylor Ball Mills, 450 H.P. (4)
Belt Conveyor-up to 54" wide, up to 500' long
10" x 24" Allis-Chalmers Jaw Crusher
Size 322 Allis-Chalmers Hydro-Cone Crusher
250 TPH Pennsylvania Hammermills (4)
9' x 30' Chatanooga Paddle Mixer (2)
8' x 12' Chatanooga Paddle Mixer (2)
Misc. Pumps, Compressors, Screens, Tanks, Dust Collectors, Feeders and Conveyors.

SEE FULL PAGE AD NEXT WEEK

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Cleveland, Ohio 44127 • 216-271-3500

JUST PURCHASED WESTERN STATES CENTRIFUGE 48" X 30" PERFORATE, S.S. 316 BOTTOM DUMP, HYDRAULIC, 50 HP

BLENDER-330 cu. ft. Areco Steel End
CENTRIFUGE-30"x18" Sharples, Solid, S.S. 316, 25HP
CENTRIFUGE-Podbielniak #5500, PUP, S.S. 316, 2HP Vari XP
COLUMN-36"x20' Pfaudler Glass Lined Packed
DRYER-5 cu. ft. P.K. Conical Vacuum Stainless
EVAPORATOR-6.54 sq. ft. Rodney Hunt, S.S. 316, Hot Oil Jkt.
EXCHANGER-388 sq. ft. 304 S.S., 150 PSI UNUSED (4)
EXCHANGER-278 sq. ft. 304 S.S., 175 PSI UNUSED
EXCHANGER-8 sq. ft. All 316 S.S. 150/3000 PSI Code
EXTRUCTOR-Rietz 6", S.S. 304, 5HP Vari XP
FILTERPRESS-24" Columbia S.S. 18 Chmbr, Hydr. (2)
KETTLE-80 gal. Stainless Jacketed
MILL-Fitzpatrick Model D-6 S.S. 5 HP
MIXMULLER-Simpson 2, Style UD, 72" dia., S.S.
MIXMULLER-Simpson 1F, Style UD, 50" dia., S.S.
MIXTRUDER-300 gal. S.S., Jkt., Heavy Duty
PROCESSOR-5 cu. ft. P.K. V-type, S.S. Jkt. Vac. 550#
PROCESSOR-10 cu. ft. P.K. V-type, S.S. Jkt. Vac. 550# (3)
REACTOR-50 gal. Pfaudler Glass Lined TW Drive
REACTOR-5 gal. Pfaudler, S.S. 316, 60/90 PSI, TW Drive
TANK-9500 gal. Horizontal, 304 Stainless Saddles
TANK-4200 gal. Vertical, 304 S.S. 25 PSI, UNUSED
TANK-4000 gal. Vertical, 304 S.S. 25 PSI UNUSED (2)
TANK-1000 gal. Pfaudler Glass-Lined Vertical
TANK-30 gal. Pfaudler Glass Lined Jacketed
VACUUM PUMP-1550 CFM @ 24" Nash H-10, 125 HP
VACUUM PUMP-Stokes 300 CFM 412-H, 10HP (5)
VERSATOR-D-8 Cornell, S.S. 316, 1½ HP Vari XP

H&P EQUIPMENT CO. INC.
P.O. Box 368, Montville, N.J. 07045
(201) 335-9770-1-2-3 ● TELEX 136357

CMR MARKETPLACE

CHEMICAL MARKETING REPORTER'S CLASSIFIED ADVERTISING SECTION

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RATES/Classified Ads: $57.75 for 36 words or less; $9.75 for each additional six words or fraction. No display. First two words printed in bold face type. Non-display advertisements payable in advance, except for contract customers (not subject to agency commission).

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Hazardous Waste Facility — For Sale — Southeast. Just off major interstate. 4 year fuel blending history. NPDES/Transporter's/Final RCRA Part B Storage and Treatment permits in place. Write or call: BDC, P.O. Box 901, Midlothian, VA 23113. (804) 272-2893.

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Morgan Chemical of California offers the following, in good condition, at half off list f.o.b. California.: 13 drums U.C. Diethylenetriamine, 13 drums Allied DY027 Epoxy Resin Dilutent, 18 drums Witco Glycerol Monoricinooleate (Flexricin 13), 350 cubic feet ion exchange resin, 12,000 lbs various grades atomized aluminum powder by 3m, 9 drums tricresyl phosphate, 5000-3 oz. tubes d.c. 3145 electronic clear silicone sealant, 900 lbs. lead fluoride, 14 drums emery emolein 2911, 415-891-2323 & 415-822-7733.

CHEMICALS OFFERED/WANTED

Chem/Mart Corp. will buy all of your surplus or off spec. chemicals, plastics, pharmaceuticals and resins. Current bargain offerings: Der 667 Resin; 19M lbs. Kraton D4141; Calcium Acetate, U.S.P. and Gallic Acid, 16 dr. 3,4 Dimethylaniline and 10M lb. Cadmium Bromide, 99 percent. Prompt efficient Nationwide service. Chem/Mart Corporation, 640 N. LaSalle St. Chicago, IL 60610. (312) 787-8800.

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All Surplus — Chemicals — Resins — Oils — Colors Solvents — Plasticizers — Specialties — Intermediates — bought by: Rambach Chemical Co., Inc. 52 Vesey Street, PO Box 5187, Newark, NJ 07105. Phone: (201) 589-7774.

Cash For your surplus chemicals, resins, colors, pharmaceuticals, dyes, other raw materials, by products, wastes, residues and off-spec materials. Morgan Chemicals Inc., 5500 Main Street, Williamsville, NY 04221 (716) 632-4000; Telex 919133.

Realize Top Value from the sale of your surplus Chemicals. We buy surplus Chemicals, Plastics, Resins, Waxes, etc. Bonmar Chemical Co., P.O. Box 494, Fair Lawn, NJ 07410. Phone. (201) 791-2448; Telex: 13-0434.

Resyn Corp. will buy your surplus chemicals, resins and resin raw materials — prime or off-specification, Resyn Corp. P.O. Box 63, 1540 W. Blancke St., Linden, NJ 07036. (201) 862-8787.

Sludges, residues byproducts, catalysts, off spec or contaminated material, surplus, etc. containing any base, precious, refractory, minor etc. metals. Sharper Alloys Inc., P.O. Box 231, St-Jean-Sur-Richelieu, Quebec, Canada. Tel.: 514-349-2534.

Surplus Chemicals: Wanted, high prices paid-for-surplus chemicals, resins, pharmaceuticals, colors, plasticizers, solvents, waxes, etc. Prompt and efficient service. Try us for better prices. Chemisales Inc., 107-27 180th Street, Jamaica, N.Y. 11433. (718) 658-0400-01.

Surplus Wanted: Chemicals, pharmaceuticals, dyes, solvents, pigments, waxes, other raw materials. Over 55 years service Chemical Service Div., P.O. Box 848. 97-05 Ongley St., Rockville Centre, NY 11571. (516) 536-5533.

We Buy Surplus chemicals, colors, resins, solvents, plasticizers by-products, etc. Over 50 years of service to industry. Eastern Color & Chemical Co., Inc. 65 Roosevelt Ave., Dept. C.P.O. Box 1029, Valley Stream, N.Y. 11582. (516) 791-4445.

EQUIPMENT OFFERED

Diamantler has used process equipment for sale: Columns, Exchangers, Heaters, Reactors, Pressure Vessels, Tanks, etc. Midwest Steel Co., Inc. 9825 Moers Road Houston, Texas 77075. 713/991-7843.

Process Equipment for Sale: Baker-Perkins Ter-Meer centrifuge 316ss, 5/ton/hour capacity with hydraulic push for unloading. Aeromatic fluid bed dryer 316SS, 200 kg/hours capacity. Baltimore air-coil cooling tower 125 ton. 881-767-2038.

Stainless Steel Mixing Equipment Remanufactured on a special or custom basis for powders, slurries, blends, liquids, reactions etc. Let us quote your needs. Mixer-King Company. 9503 Fremont, Kansas City, Missouri 64134. 816-471-1475.

EQUIPMENT WANTED

"Sigma Blade Double Arm Mixer, 400 to 600 gal., jacketed and stamped, minimum 100 HP, bottom discharge. Call or Write Luca De'Seta, H.L. Blachford Ltd., 2323 Royal Windsor Drive, Mississauga, Ontario, Canada. L5J 1K5, (416) 823-3200."

POSITIONS OFFERED

Chemical Sales Aggressive chemical distributor currently has high potential sales position available in N.J. Minimum 2-3 yrs. chemical sales experience with good customer following, familiarity with the industrial chemical line and technical sales required. We offer competitive compensation – terrific opportunity. Send resume to CMR 755.

West Coast Sales Representative — Major N.Y. based international chemical company has an opening for a high-calibre and creative sales specialist with min. 5 years' successful selling experience in industrial, pharmaceutical, feed and food chemicals. Must be able to work independently. Chemical degree desirable. Top benefits — generous renumeration. Send complete resume to CMR 753.

REPRESENTATION WANTED

"Your Man in Spain for pharmaceutical raw materials? Please write to: Mario Oro, Calle Manila 43, 08034-Barcelona, Spain. Telex 51.130 for code 16.00.009. Tel. N°204.57.78=204.26.83.

SERVICES OFFERED

Custom solids packaging and distribution in the port of Mobile, Multi-wall bags, bulk bags, drums and bulk, Screening, repackaging and warehousing. Rail and truck facilities. Contact: Philip Hahn, SEAPAC, Bldg. 14A, Brookley Complex, Mobile, AL 36615, 205/433-3541.

Want To Sell More in '87? Experienced in identifying and developing U.S. markets. Can assist management with facts, strategies or sales support to expand in pharmaceutical and chemical industries. Please write Box 754, CMR.

CHEMICAL IMPORTS

Continued from Page 45

PERBORATE ANHYDROUS Degussa 318 dms (117779 lbs) (Dart Continent) Bremerhaven, 11/5.
PERCHLOROETHYLENE Powell Dufrynn Terminal 1 bks (7011735 lbs) (Liquid Bulk Entit) Samia, 11/24.
PERCHLOROETHYLENE Brentag Interchem 1 bks (1101991 lbs) (Jo Lind) Rotterdam, 11/9.
PERCOL 175 Allied Colloids 30 bbg (37739 lbs) (Sea Land Voyager) Rotterdam, 11/8.
PERITONEAL DIALYSES SOLUTION Delmed 1508 cs (46544 lbs) (Bridgewater) Vlissingen, 11/9.
PERITONEAL DIALYSES SOLUTION Delmed 4284 cs (132223 lbs) (American Aquarius) Rotterdam, 11/13.
PHENOLPHTHALEIN SUP Leyden Customs Expediters 200 kgs (13228 lbs) (American New Jers) Hong Kong, 11/3.
PHENYL ETHYL ALCOHOL Polarome Mfg 80 dms (38977 lbs) (Ming Ocean) Yokohama, 11/6.
PHENYL METHYL PYARAZOLONE Lonza 200 bgs (9921 lbs) (Stuttgart Express) Bremerhaven, 11/11.
PHOSPHOROUS PENTACHLORIDE 360 hob (38825 lbs) (Stuttgart Express) Bremerhaven, 11/11.
POLYCYCLOPENTADIENE RESIN UCC 30 dms (13767 lbs) (Dart Continent) Felixstowe, 11/5.
POLYETHYLENE GLYCOL 14000 500 bgs (23832 lbs) (Ever Genius) Hamburg, 11/5.
POLYMERIC LIGHT STABILIZER Ciba Geigy 220 dms (26336 lbs) (Freedom Ms) Leghorn, 11/4.
POLYMETHYLENE POLYMETHYL Montedison 66 dms (39650 lbs) (Sea Land Voyager) Rotterdam, 11/6.
POLYPROPYLENE RESIN Marubeni America 800 bgs (44312 lbs) (Ever Gleamy) Tokyo, 11/6.
POLYPROPYLENE RESINS SYNTHETIC Votainer Cosolidation Servi 3 pbx (3538 lbs) (Numberg Express) Rotterdam, 11/5.
POLYTETRAFLUOROTHYLENE Ausimont 144 dms (10163 lbs) (Cape Hatteras) Le Spezia, 11/7.
POLYVINY ALCOHOL Perry Chemical 750 pkg (37838 lbs) (Ever Gleamy) Keelung, 11/6.
Sakai Trdg 760 bgs (84571 lbs) (Chao He) Kobe, 11/6.
POLYVINYL CHLORIDE Tarkett 759 bgs (43431 lbs) (Ever Genius) Hamburg, 11/5.
Tarkett 759 bgs (43431 lbs) (Ever Garden) Hamburg, 11/10.
Tarkett 759 bgs (43431 lbs) (Ever Genius) Hamburg, 11/5.
POTASSIUM BICARBONATE PHARMA Kay Fries 400 bgs (45150 lbs) (Ever Garden) Antwerp, 11/10.
POTASSIUM CHLORATE T R America Chemicals 160 mix (47267 lbs) (Sea Land Pioneer) Algeciras, 11/6.
144 dms (43947 lbs) (Sea Land Voyager) Rotterdam, 11/6.
POTASSIUM CHLORIDE Potash Import & Chemical 720 bgs (40000 lbs) (Stuttgart Express) Bremrehaven, 11/11.
POTASSIUM FERRICYANIDE Panalpina 300 dms (36376 lbs) (Husum) Hamburg, 11/7.
POTASSIUM FERROCYANIDE Degussa 160 bgs (8858 lbs) (Dart Continent) Antwerp, 11/5.
POTASSIUM FLUORIDE Kali Chemie 60 bgs (0 lbs) (Ever Garden) Hamburg, 11/10.
POTASSIUM HYDROXIDE ACS J T Baker Chemical 343 dms (40001 lbs) (Sea Land Voyager) Bremerhaven, 11/6.
POTASSIUM METAPERIODATE Imarchem 1 dms (57 lbs) (Dart Continent) Felixstowe, 11/5.
POTASSIUM PENICILLIN G Beecham 202 ctn (12024 lbs (American Aquarius) Felixstowe, 11/13.
POTASSIUM PERMANGANATE Advent Chemical 340 dms (443475 lbs) (Xiang He) Hong Kong, 11/6.
POTASSIUM SORBATE GRANULAR 200 dms (22046 lbs) (Ming Ocean) Kobe, 11/6.
POTASSIUM SORBATE POWDER 181 mix (20639 lbs) (Ming Ocean) Kobe, 11/6.
POTASSIUM SULPHATE Inter Maritime Fwdg 180 dms (41667 lbs) (Gina S) Bremen, 11/8.
PROPYLENE CARBONATE 64 dms (37954 lbs) (Ming Ocean) Yokohama, 11/6.
PROPYLENE GLYCOL 1 bks (3309585 lbs) (Stolt Llandaff) Rotterdam, 11/6.
PSEUDOEPHEDRINE Ganes Chemicals 40 pkg (2557 lbs) (American New Jers) Hong Kong, 11/3.
PSYLLIUM SEED HUSK Lafayette Pharmaal 1440 bgs (139686 lbs) (American New Jers) Khro Fakkan, 11/3.
PVC Laufer Shpg 700 bgs (38812 lbs) (Uranus I) La Guaira, 11/7.
Ausimont 40 plt (27998 lbs) (Americana) Genoa, 11/18.
Enichem America 880 bgs (40556 lbs) (Americana) Leghorn, 11/18.
Sybron Chemicals 320 dms (92880 lbs) (Americana) Genoa, 11/18.
277 mix (43672 lbs) (Americana) Genoa, 11/18.
Teknor Apex 800 bgs (46033 lbs) (Xiang He) Kobe, 11/6.
PYRIDOXINE VITAMIN B6 Amalgamated Metal 40 dms (2557 lbs) (Xiang He) Shanghai, 11/6.
QUATERNARY AMMONIUM CHLORIDE Lonza 259 mix (32434 lbs) (Ming Ocean) Yokohama, 11/6.
RED OXIDE Vio 40 plt (89419 lbs) (Liberty) Valencia, 11/11.

S-T

SACCHARIN SODIUM F & S Alloys & Minerals 320 dms (38098 lbs) (American New Jers) Hong Kong, 11/3.
SALICYLIC ACID Rhone Poulenc 160 dms (43880 lbs) (Arild Maersk) Marseille, 11/5.
160 dms (43880 lbs) (Liberty) Fos, 11/11.
SASSAFRAS OIL 47 dms (24143 lbs) (Xiang He) Shanghai, 11/6.
SEBACIC ACID A J Fritz 1360 bgs (74958 lbs) (Xiang He) Hong Knog, 11/6.
Seacon Express 720 bgs (42364 lbs) (Xiang He) Hong Kong, 11/6.
SESAME CHILI OIL New York Mutual Trdg 2 ctn (0 lbs) (Ming Ocean) Yokohama, 11/6.
SESAME OIL Dalei Trdg 50 ctn (0 lbs) (Chao He) Kobe, 11/6.
Dosanko Foods 3 ctn (119 lbs) (Leda Maersk) Tokyo, 11/20.
SESAME PASTE Chung Kong Trdg 40 ctn (0 lbs) (Xiang He) Hong Kong, 11/6.
SESAME PASTE POWDER Tai Wing Hong Imports 50 ctn (0 lbs) (Xiang He) Hong Kong, 11/6.
SESAME SEED New York Mutual Trdg 20 ctn (0 lbs) (Ming Ocean) Yokohama, 11/6.
Nishimoto Trdg 5 ctn (143 lbs) (Xiang He) Kobe, 11/6.
SESAME SEED OIL Nishimoto Trdg 15 ctn (0 lbs) (Chao He) Kobe, 11/6.
15 ctn (331 lbs) (Xiang He) Kobe, 11/6.
3628 gal (30761 lbs) (Uranus I) Pto Cabello, 11/7.
SESAME SEED PASTE Nishimoto Trdg 10 ctn (353 lbs) (Xiang He) Kobe, 11/6.
SILICON CARBIDE LIDS & TUBES Hoeganaes 18 plt (0 lbs) (Ever Garden) Hamburg, 11/10.
SILICON CARBIDE RINGS Hoeganaes 684 pcs (0 lbs) (Ever Garden) Hamburg, 11/10.
SILICON TETRACHLORIDE Wacker Siltronic 2 brl (174 lbs) (Stuttgart Express) Hamburg, 11/11.
SILICONE Rhone Poulenc 1 tnk (39220 lbs) (Tadeusz Kosciuszk) LeHavre, 11/20.
SILICONE FLUID 80 dms (38977 lbs) (Leda Maersk) Tokyo, 11/20.
SODIUM ACETATE Acetocorp 590 bgs (33169 lbs) (Xiang He) Shanghai, 11/6.
SODIUM AZIDE Universal Transcontinental 51 dms (0 lbs) (Chao He) Kobe, 11/6.
SODIUM BICARBONATE USP PWD Vituea 180 bgs (398018 lbs) (Ever Garden) Antwerp, 11/10.
SODIUM CASEINATE De Zaan 800 bgs (44771 lbs) (Ever Genius) Antwerp, 11/5.
800 bgs (44760 lbs) (Ever Garden) Rotterdam, 11/10.
De Zaan 1200 bgs (40582 lbs) (Ever Garden) Rotterdam, 11/10.
SODIUM CYANIDE Degussa 400 dms (67056 lbs) (Stuttgart Express) Bremerhaven, 11/11.
SODIUM DEHYDROACETATE Total Port Clearance 30 dms (1620 lbs) (Leda Maersk) Kobe, 11/20.
SODIUM ETHYLATE POWDER Kay Fries 120 pkg (26191 lbs) (Tadeusz Kosciuszk) Bremerhaven, 11/20.
SODIUM FERROCYANIDE FCC Degussa 560 bgs (31001 lbs) (Dart Continent) Antwerp, 11/5.
SODIUM FERROCYANINE 1360 bgs (75407 lbs) (Xiang He) Shanghai, 11/6.
SODIUM FORMALDEHYDE SULFOXYLATE Super Freight Intl 440 dms (78497 lbs) (Ever Gleamy) Kaohsiung, 11/6.
SODIUM GLUCONATE Akzo Chemical America 700 bgs (35463 lbs) (Ever Genius) Rotterdam, 11/5.
PMP Fermentation Products 3200 bgs (161906 lbs) (Ming Ocean) Kobe, 11/6.
SODIUM PHOSPHATE 350 bgs (39961 lbs) (Numberg Express) Antwerp, 11/5.
SODIUM SULFHYDRATE FLAKE UTC 720 bgs (79921 lbs) (Gina S) Antwerp, 11/8.
SODIUM TRIPOLYPHOSPHATE Browning Chemical 960 bgs (50593 lbs) (Jebel Ali) Leghorn, 11/11.
SAF Customs 432 bgs (44231 lbs) (Jebel Ali) Leghorn, 11/11.
SODIUM TRIPOLYPHOSPHATE FOOD GRA Browning Chemical 860 bgs (45161 lbs) (Husum) Hamburg, 11/7.
SODIUM TRIPOLYPHOSPHATE GRANULAR Inter Maritime Fwdg 20 pkg (44974 lbs) (Zim Montreal) Haifa, 11/12.
STYRENE MONOMER 1 bks (4513969 lbs) (Stephanie) Rotterdam, 11/13.
SUCCINIC ACID Chemical Dynamics 240 bgs (13439 lbs) (Ming Ocean) Yokohama, 11/6.
SULFAMETHAZINE BP Flavine Intl 360 dms (46032 lbs) (American New Jers) Hong Kong, 11/3.
SULFAMIC ACID 3850 bgs (196750 lbs) (Ming Ocean) Kobe, 11/6.
SULFAQUINOXALINE Universal Transcontinental 200 dms (25574 lbs) (Husum) Rotterdam, 11/7.
SULFONIC ACID LABS 77 dms (38195 lbs) (Zim Montreal) Haifa, 11/12.
SULPHANILIC ACID A & D Intl 160 bgs (17743 lbs) (Arild maersk) Dubai, 11/5.
SULPHUR HEXAFLUORIDE ESAFLON Montedison 164cyl (38639 lbs) (Americana) Leghorn, 11/18.
SULPHURIC CHLORIDE ICT Consultants 1 con (43298 lbs) (Ever Genius) Antwerp, 11/5.
TANTALUM INGOTS Votainer Consolidation Servi 7 mix (2921 lbs) (Numberg Express) Rotterdam, 11/5.
TARTER EMETIC F W Myers 12 dms (1437 lbs) (Americana) Genoa, 1/18.
TEA TREE OIL Trilling Resources 3 dms (1389 lbs) (Columbus Queensia) Sydney, 11/6.
TETRASODIUM PYROPHOSPHATE SAF Customs 720 bgs (37233 lbs) (Jebel Ali) Leghorn, 11/11.
THIAMIN MONO First Michigan Bank 240 dms (15826 lbs) (Chao He) Shanghai, 11/6.
THIOACETAMIDE REGULAR 40 dms (4938 lbs) (Ming Ocean) Kobe, 11/6.
THIOACETIC ACID DANGEROUS 20 dms (2513 lbs) (Freedom Ms) Fos, 11/4.
THIOGLYCOLIC ACID Evans Chemetics 78 pcs (44796 lbs) (Sea Land Voyager) Bremerhaven, 11/8.
THIOUREA James E Fox 864 bgs (43486 lbs) (Ever Garden) Hamburg, 11/10.
THIOYLCOLIC ACID Carlstad 84 dms (41341 lbs) (Sea Land Voyager) Bremerhaven, 11/6.
THYME LEAVES Louis Furth 500 bgs (33069 lbs) (Cape Hatteras) Valencia, 11/7.
Morris J Golombeck 280 bgs (30800 lbs) (Cape Hatteras) Valencia, 11/7.
TITANIUM DIOXIDE Archway Chemical & Supply 880 bgs (44137 lbs) (Sea Land Pioneer) Algeciras, 11/5.
Leschaco 760 bgs (39592 lbs) (Numberg Express) Antwerp, 11/5.
114 plt (236787 lbs) (Numberg Express) Antwerp, 11/5.
N L Ind 2400 bgs (123812 lbs) (Sea Land Voyager) Rotterdam, 11/6.
800 bgs (42505 lbs) (Ever Garden) Antwerp, 11/10.
Tioxide 720 bgs (41072 lbs) (Sea Land Pioneer) Algeciras, 11/5.
TITANIUM DIOXIDE RUTILE Kemira 1400 bgs (72930 lbs) (Tadeusz Kocluszk) Bremerhaven, 11/20.
N L Ind 4000 bgs (204940 lbs) (Tadeusz Kosciuszk) Bremerhaven, 11/20.
TITANIUM SPONGE LUMPS Sumitrans 120 dms (72090 lbs) (Ever Gleamy) Osaka, 11/6.
TITANOX N L Ind 1800 bgs (92461 lbs) (Numberg Express) Antwerp, 11/5.
2400 bgs (123812 lbs) (Sea Land Voyager) Rotterdam, 11/6.
TOLONATE Rhone Poulenc 225 dms (109624 lbs) (Freedom Ms) Fos, 11/4.
TRICHLOROETHYLENE 1 bks (221723 lbs) (Lucor Manor) Birkenhead, 11/11.
TRIMETHYL CYCLODODECATRIENE 21 dms (8889 lbs) (American New Jers) Kobe, 11/3.
TRIMETHYL CYCLOHEXENYL METHYL BU 80 dms (34921 lbs) (Carmen Canna) Marseille, 11/7.
TRIMETHYL THIOUREA THIATE EF2 SDP Intl 50 dms (5512 lbs) (Ming Ocean) Yokohama, 11/6.
TRIMETHYLOLPROPANE Leschaco 1 con (40829 lbs) (Stuttgart Express) Rotterdam, 11/11.
TRISODIUM PHOSPHATE ANHYDROUS Browning Chemical 1 bbg (0 lbs) (American Aquarius) Rotterdam, 11/13.
200 bgs (0 lbs) (American Aquarius) Rotterdam, 11/13
TURKISH LAUREL Pacific Spice 82 bls (0 lbs) (Sea Land Pioneer) Algeciras, 11/5.
TYLOSE MH 640 bgs (33221 lbs) (Ever Garden) Hamburg 11/10.

U-Z

ULTRAMARINE BLUE 37 Whittaker Clark & Daniels 727 bgs (40869 lbs) (American Aquarius) Felixstowe, 11/13.
ULTRAMARINE PIGMENT Whittaker Clark & Daniels 723 bgs (41936 lbs) (Sea Land Voyager) Rottedam, 11/6.
UREA FORMALDEHYDE MOLDING POWDER 820 bgs (45194 lbs) (Zim Montreal) Haifa, 11/12.
155 dms (38748 lbs) (Zim Montreal) Haifa, 11/12.
UREA FORMALDEHYDE MOULDING POWDER 820 bgs (45194 lbs) (Zim Montreal) Haifa, 11/12.
UREA MOULDING COMPOUNDS 820 bgs (45194 lbs) (Zim Montreal) Haifa, 11/12.
41 pkg (10595 lbs) (Zim Montreal) Haifa, 11/12.
VESTAMID T Y 4582 NATURAL Nuodex 432 bgs (21385 lbs) (Tadeusz Kosciuszk) Rotterdam, 11/20.
WHITE PEPPER Encore Intl 100 bgs (11133 lbs) (Solimoes) Belem, 11/7.
WHITE SESAME SEED FC Intl 7 ctn (353 lbs) (Xiang He) Kobe, 11/6.
WINGSTAY S Goodyear Intl 72 dms (31305 lbs) (Ever Genius) LeHavre, 11/5.
WOOL GREASE Amerchol 80 dms (36757 lbs) (Columbus Queensia) Melbourne, 11/6.
80 dms (36362 lbs) (Columbus America) Pt Chalmers, 11/11.
YEAST Nestle 400 dms (44886 lbs) (Gina S) LeHavre, 11/8.
769 dms (86292 lbs) (Ever Garden) LeHavre, 11/10.
YTTRIUM OXIDE Ore & Chemical 20 dms (2491 lbs) (Xiang He) Shanghai, 11/6.
ZINC CHLORIDE Ariel Maritime Group 100 dms (11574 lbs) (Nurnberg Express) Antwerp, 11/6.
1 plt (2315 lbs) (Nurnberg Express) Antwerp, 11/5.
ZIRCONIUM BASIC CARBONATE F B Vandegrift 180 dms (41667 lbs) (Gina S) Felixstowe, 11/8.

COATINGS & PLASTICS

Continued from Page 33

the total adhesives market, producers say tall oil rosin's share will increase, as users continue to be attracted by its superior color, odor and performance properties.

CARBON BLACK — Columbian Chemicals Company, now a subsidiary of Phelps Dodge Corporation, has announced that it will raise carbon black prices by 7 to 8 percent, depending on grade, effective January 1. Other producers have not yet made any price changes.

A 25 percent increase in raw material costs is said to be driving the increase. Margins in this already depressed market suffered considerably this quarter as carbon black oil costs increased by $3 per barrel, to $12.50 per barrel.

The previous quarter, producers cut prices for the pigment by 1c. to 1.5c. per pound, when carbon black oil prices fell to $9.50 per barrel. Despite two increases in oil costs this quarter, producers of carbon black were unable to pass along higher production costs.

Although producers note a levelling off of pigment imports, particularly from Canada and Mexico, over the third and fourth quarters this year, imports of finished goods continue to plague the market.

Between 55 percent and 70 percent of the total amount of carbon black produced goes into tires. With tire and finished rubber imports up, one producer relates, flat to 1 percent growth at best is expected this year.

IRON OXIDES — A major producer of synthetic iron oxides is said to have announced increases of 3c. per pound on prices for synthetic red, yellow and brown oxides, to take effect January 1. A spokeswoman for the company relates that letters have been sent to customers, but official announcements will not be made for at least another week.

Other producers have not yet announced price changes; many regard this new price increase announcement with considerable skepticism. As one distributor of the pigment remarks, "a lot of companies have been playing games with pricing. They issue new price schedules, but don't adhere to them."

Discounting has been the norm in this market for some time, obscuring an accurate assessment of actual market prices. Currently, black synthetic material is listed between 67c. per pound and 78c. per pound, red oxides between 67c. and 79c. per pound, and brown between 68c. per pound and 74c. per pound. Discounts of 10 to 15 percent off list price are common, says one producer. Others say discounts may be as high as 25 percent to some large volume accounts.

There is a worldwide overcapacity problem in this market, producers say, and imported material has established a strong presence in the US market. One producer reports that a sizeable amount of yellow oxide has been coming in from Germany lately, selling for the same price as domestically-produced material.

Producers describe a significant drop in imports of magnetic grade oxide. Demand is said to be healthy in this area, with video tape demand growing at 20 percent per year, and audio demand between 4 and 5 percent per year. Some domestic magnetic oxide capacity was brought back on line earlier this year, when Pfizer reopened a mothballed plant in Val Paraiso, Ind.

The overall market is expected to grow by 1 percent this year.

ORGANIC PEROXIDES — The Lucidol Division of Pennwalt Corporation will raise list prices for six of its organic peroxide products by 5 percent effective January 1, the firm announced last week.

The products involved follow, with their new list prices:

"Lupersol" 230 (n-butyl 4,4 bis (t-butyl peroxy) valerate) - $6.14 per pound.

"Luperco" 230-XL (dilute "Lupersol" 230, 40 percent filler) - $4.46 per pound.

"Lupersol" 75M (t-butyl peroxy acetate, 50 percent in OMS) - $2.63 per pound.

"Lupersol" ACP (benzoyl peroxide, 35 percent with inorganic phosphate) - $2.20 per pound.

"Luperco" AST (benzoyl peroxide, 50 percent paste with silicone oil) - $7.79 per pound.

"Luperco" 231-P75 (1,1 bis (t-butyl peroxy) 3,3,5 tri methyl cyclohexane (75 percent in plasticizer) - $4.63 per pound.

PHENOLIC RESINS — The Industrial Phenolics Division of Borden Chemical Company will raise prices for its liquid and solid grades of phenolic resin in January, a spokesman for the company reported last week.

An effective date has not yet been established, but the increase will move prices for liquid grades up 1c. to 3c. per pound, depending on grade. Prices for solid powder and flake grades will rise between 3c. per pound and 4c. per pound.

This follows announcements by BTL Specialty Resins the previous week, which increased industrial liquid grade prices by 2c. and powder grade prices by 3c. per pound.

Recently announced phenol price increases are said to have motivated this price increase. A previous attempt to move prices this quarter failed when phenol makers rescinded increases.

Although prices in this market, kept low by phenol pricing, have been depressed for much of this year, demand has been strong, particularly in construction-related areas.

SPI year-end estimates for the market show phenolic resin production up 3.4 percent from last year, with sales up 4.5 percent.

POLYPROPYLENE — Last week, all but two major US producers of polypropylene joined in an across-the-board price increase initiative led by Himont USA Inc. and Fina Oil & Chemical Company three years ago.

Amoco Chemical Company and Eastman Chemical Inc. intend to raise prices by 4c. per pound on January 2 and January 5, while Soltex Polymer Corp., USI (formerly Envon) and Shell Chemical Company say they will raise prices for the plastic by 3c. per pound effective January 5 and January 1.

The previous week, El Paso Products Inc. and the Aristech Division of USX Corporation announced increases of 3c. per pound and 4c. per pound, to take effect January 1 and January 5, following Himont's and Fina's announcements of 4c.-per-pound and 3c.-per-pound increases the week before.

This year has been an excellent one for the plastic. SPI year-end estimates of sales and production show production up 10.6 percent this year, to 5.68 billion pounds, with sales up 8.9 percent to 5.745 billion pounds.

The export segment has assumed greater importance in the market. This year, SPI estimates that exports will garner over 19 percent of total sales and use.

ORGANOPHOSPHOROUS — Albright & Wilson, Inc., a subsidiary of Tenneco Inc., will increase prices for organophosphorous chemicals as contracts permit effective January 1. Products involved include alkyl phosphites, alkyl phosphates, alkyl phosphonates and flame retardants.

Prices for "Antiblaze" 80 and "Antiblaze" DMMP flame retardants will increase by 5c. per pound to all off-list customers, while those for most alkyl phosphites and phosphates will increase by 3c. per pound to 5c. per pound to all customers.

This announcement supersedes last week's announcement (CMR, 12/8/86, page 52), which was incomplete.

PERFUMES & FLAVORS

Continued from Page 34

taking acreage out in order to market the pool oil carried over from last year. One farmer says he has taken 25 percent of his spearmint acreage out of production.

This administrator emphasizes that exports of spearmint oil are up an average of close to 30 percent over last year and are helping to deplete the 1986 pool oil (Native, 700,000 pounds; Scotch, 390,000 pounds).

Another spearmint farmer finds the Federal Marketing Order useful in maintaining the integrity of the oil marketed. "The result has been a higher quality product; a farmer knows he can spend more money on his crop." An additional advantage cited is the financial stability as perceived by banks involved in lending to farmers. "They'll lend more readily to a spearmint grower than a peppermint grower," he says.

The issue of the Federal Marketing Order will always be a contentious one, the administrator points out, because "it is a federal program and has its opponents." The article of 11/10/86 was also in error by not delineating the Scotch spearmint market from the Far West: the Scotch pool oil is considerably less than the Far West and does not compete head to head with imports.

SEEDS AND SPICES

ALLSPICE — Central American allspice has experienced a series of price advances beginning at the end of October when spot prices increased 5c. per pound to 92c. and reaching 97c. per pound last week. Sources report dwindling supplies in Guatemala and Honduras with no significant offers expected soon.

OREGANO — The Canadian government raised the allowable limit of radiation levels for oregano from 300 to 3,000 becquerels per kilo two weeks ago. The policy change will allow material previously unavailable for import to be brought into Canada. Samples of the 1986 Greek and Turkish Oregano crops have been found to be contaminated by the accident at Chernobyl last April.

Sources close to the US spice market do not expect the Canadian decision to affect current policies at US customs, though it could apply additional pressure on FDA to adjust their guidelines. "We have made attempts to have the levels raised," says one spice broker, "but FDA has declined our requests."

A representative of FDA monitoring the influx of potentially contaminated materials said there were no plans under current consideration to alter the existing limits.

Present guidelines require spices containing more than 8,000 pico curies of iodine 131 (296.3 becquerels) or 10,000 pico curies of cesium 134 and/or cesium 137 (370.4 becquerels) be returned to point of origin upon arrival at US ports.

The Canadian action will free up some of the 1986 Mediterranean oregano crop, providing relief to the Greek and Turkish producers who have been holding stocks for over four months with no interested buyers in sight. The US, for example, has not let any of the 1986 crop in to the country: "Because of the radiation levels," says this same spice broker, "none of the 1986 has made it here."

One of the outcomes of the contamination of the 1986 Mediterranean oregano crop has been the shippers' assumption of risk should a particular shipment exceed allowable levels. Because they would have to turn around and bring it back, says one source, prices include a premium: "Business isn't normally done this way."

Another outcome has been the astronomically high prices dominating the market since September, driven up, one importer says, by the buying pressure in the US. He cites a domino effect that has exhausted the 1985 oregano crop. "Once the price runs got going, the shippers sought out remaining material warehoused in Greece and Turkey. For holders of material, the price was obviously right."

Quotes for oregano, ex-warehouse New York, are $2.85 per pound for Greek and Turkish, $1.50 to $1.80 per pound for Mexican varieties, and, new additions to the US market (and reflections of unsatisified demand), $2 per pound for Chilean and Peruvian 1985 crop.

Sabic Signs Urea Contract

Saudi Basic Industries Corporation will supply 200,000 metric tons of urea fertilizer to a number of companies in the People's Republic of China during 1987, and agreements are pending to supply other SABIC petrochemicals to that market.

Ibrahim A. Salamah, Sabic's vice-chairman and managing director, says the supply agreement for urea was concluded last month during a Saudi trade mission to China, which was organized to view the country's industrial development and to encourage increased imports of Saudi-manufactured products.

Mr. Salamah says that SABIC's trade with China is part of the company's general marketing strategy. "The urea agreement represents SABIC's continuing efforts to diversify its international marketing channels, which also accommodates the needs of downstream users worldwide."

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CHEMICAL PROFILE

LINEAR ALKYLATE

December 15, 1986

SUPPLY

PRODUCER	CAPACITY*
Monsanto, Carson, Calif.	50
Monsanto, Chocolate Bayou, Tex.	250
Vista, Baltimore, Md.	230
Vista, Lake Charles, La.	150
Total	680

*Millions of pounds per year of linear alkylate. Monsanto bought the Carson plant from Witco on October 1, 1985. The company also plans a 50-million-pound expansion at Chocolate Bayou which is due on line in late 1988. Vista's Lake Charles plant and Monsanto's Chocolate Bayou facility use a hydrogen fluoride catalyst process, while Carson and Baltimore run on a monochloroparaffin process. Profile last published 10/31/83; this revision 12/15/86.

DEMAND

1985: 550 million pounds; **1986:** 565 million pounds; **1990:** 635 million pounds (includes exports).

GROWTH

Historical (1975-1985): 0.5 percent per year; **future:** 3 percent per year through 1990.

PRICE

Historical (1952-1986): High, 47½c. per pound, tanks, works; low, 10c. per pound, tanks, frt. equald.; **Current:** 43c. per pound, tanks, works (list price).

USES

Linear alkyl sulfonates (LAS) for household detergents, 74 percent; LAS for industrial cleaners, 15 percent; exports, 10 percent; other, 1 percent.

STRENGTH

Demand has been growing steadily since 1982, due to the rising popularity of high-surfactant liquid laundry detergents, and higher surfactant levels in powdered laundry products as well.

WEAKNESS

A large spate of laundry reformulations in 1980 and 1981 caused a sharp drop in LAS consumption that producers have yet to recover from. Prices have fallen in line with raw material n–paraffins.

OUTLOOK

Most of the penetration by liquid laundry detergents will be complete by 1988 at which point surfactant LAS demand will grow at the rate of population. Monsanto's expansion at Chocolate Bayou will keep supply comfortably in balance with demand. LAS now competes less directly with other surfactants on price, but instead is now used more in conjunction with alcohol ethoxylates and other surfactants to add performance characteristics to a laundry formulation.

PLATFORM

Corporate Responsibility

The following remarks are excerpted from an address by William R. Miller, vice-chairman of Bristol-Myers Company before an international conference on private sector initiatives in Paris, France.

Harry Truman, the thirty-third president of the United States, kept two signs on his deks. On the first was a piece of advice from an American author who, like Mr. Truman and for that matter like our current President, Ronald Reagan, was well-known for his down-to-earth wisdom and sense of humor. The author was Mark Twain. Permit me to quote.

"Always do right.

This will *gratify* some people and *astonish* the rest."

On the second sign was what Mr. Truman would have called a plain fact. It said simply, "The buck stops here."

Those two sentiments for me embody what social responsibility means — accepting that "the buck stops here" for each of us who makes decisions on behalf of organizations such as the company I work for — and accepting the obligation to do *right*.

...And, just as importantly, to do right by the future we face together, by continuing and intensifying our efforts to innovate with new products that will truly make a positive difference in the lives of people throughout the world.

...Partly because of the efforts of the pharmaceutical industry, and partly because of the efforts of governments and international organizations to improve distribution, more people are receiving more and better health care than ever before in history. Nevertheless, health care remains inadequate for many millions of people. Much more needs to be done. Yet, the steadily rising cost of health care is making it less and less affordable and therefore potentially less widely available. This tragic statement is true of even the richest countries, and I know of no country that is not actively seeking ways to contain these expenses.

In the drive for cost containment, what may be lost sight of is that few if any methods of reducing health care costs are more effective and at the same time more socially responsible than prescription drugs. Cardiovascular drugs have eliminated the need for thousands of expensive heart bypass operations. Psychotropic drugs have reduced the average stay in mental hospitals significantly. Vaccines now prevent diseases, such as polio, whose costs once were devastating. Because of antibiotics, diseases like tuberculosis, which once required long-term hospitalization, now can be treated at home.

Cost-cutting... better organization of the health care system... more efficient use of resources... reforms like these can accomplish only so much. What is needed even more are advances: innovations which reduce the cost of health care in the most effective way of all — by reducing the need for it.

I repeat: only by reducing the need for health care can we possibly hope to make it available throughout the world at a cost the world can bear. This applies to the United States. It applies to France. And it applies even more strongly to most other countries, especially those of the developing world.

...Our industry also is in the forefront in support of basic research throughout the world to discover and understand the essential mechanisms of the disease process. Bristol-Myers Company itself has provided no-string-attached grants in support of basic research in cancer, nutrition, and orthopaedics totalling more than $13 million. And other companies are providing funding in other areas of basic research.

Meanwhile, whenever devastation strikes localities where we do business, it is the practice of pharmaceutical companies to make generous gifts of antibiotics and other life-saving drugs. Some recent examples include the Mexican earthquake and the mud slides in Puerto Rico.

In these acts of social responsibility, our industry is of course far from unique. Other companies and industries also give generously ... to hospitals and other health care institutions ... to a wide variety of charities in their various communities ... and to the universities, museums and institutions of the performing arts which express and preserve the essence of our civilization.

As an Englishman representing an American industry, with a perspective that reflects what I have experienced on both sides of the ocean, I remain convinced that — whether we are talking about the pharmaceutical industry or most other industries — being a profitable company in itself can be a socially responsible corporate act. Only a profitable company can employ people, provide them with income, benefits and a secure future. Only a profitable company can share its good fortune with society and with the communities of which it is a part.

Clearly, the examples of corporate social responsibility I tend to cite relate closely to my own industry. Pharmaceutical companies innately want to prevent disease, just as I am sure that food companies innately want to prevent hunger. Thus, we support research into the basic mechanisms of the disease process, and food manufacturers support research on new food crops and ways to nourish them that may help alleviate hunger in the developing world.

Companies are likely to practice social responsibility most effectively when it extends logically from their everyday functioning as businesses. The seed from which corporate social responsibility germinates is the ability to make a profit. Companies with marginal earnings, like families with marginal incomes, have no choice but to follow the doctrine that charity begins at home.

JOBS & PEOPLE

Frank Manaccio, who has been named president and chief executive officer of Procomp, Inc., a Marietta, Ga.-based specialty chemicals firm acquired last year by Eka Chemicals, Inc. and E.I. duPont de Nemours & Co. to market proprietary solvent chemical systems to the paper industry.

KEITH H. SPURR has been named chairman of International Lead Zinc Research Organization... **IAN T. KIDEYS** has been appointed sales representative for Virginia Chemicals Inc., responsible for Southern California, Arizona and New Mexico... **KATHLEEN M. MCNALLY** has been elected director of marketing at Fisons Corporation.

ARTHUR J. HILLER has been named director of licensing for the Business Development Group of Ayerst Laboratories... **MICHAEL B. ECKARDT** has been appointed sales representative covering West Atlanta and South Georgia for ChemCentral Corporation... **DONNA B. HARMAN** has been elected director of investor relations in the corporate financial communications department of Monsanto Company.

K.H. Spurr — I.T. Kideys

Aristech Executives Take Over New Firm

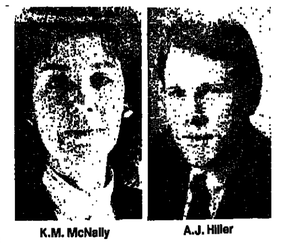
Following the transfer of USS Chemicals Division to Aristech Chemical Corporation, Thomas Marshall has assumed the title of chairman and chief executive officer of Aristech and Craig R. Andersson has become president and chief operating officer.

Mr. Marshall was formerly president of the US Diversified Group of USX Corporation and Mr. Andersson was previously president of USS Chemicals.

Mr. Marshall said Aristech "will continue to manufacture and market the same wide range of chemicals and polymers as did USS Chemicals."

T. Marshall — C. Andersson

GLEN O'CONNOR has been appointed sales representative in the Adhesives Division of National Starch & Chemical Corporation... **GASTON CEVALLOS** has been named manager of finance for Dow Chemical Europe.



K.M. McNally — A.J. Hiller

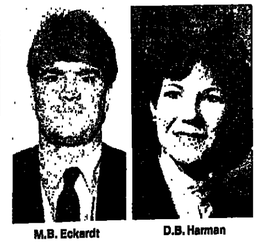
DONALD H. DECLERCK has been appointed director of quality assurance at Plaudler Company... **BAL K. DUBEY** has been named manager of commercial development for coil coatings at Akzo Coatings America Inc... **DR. ROMEO RONCUCCI** has been appointed vice-president of research and development at Erbamont NV.

William L. Fagley, who has been appointed business counselor for Dow Chemical Company. He was most recently associate business counselor in the company's innovation development department.

JOHN R. HARKNESS has been named Canadian sales development manager for the pulp and paper industry at the Newport Division of Reichhold Chemicals Inc... **FRANK LICHTENBERGER** has been appoined general manager of the Color Division of H. Kohnstamm & Co. Inc... **ROBERT DENNIS** has been appointed sales representative for SCM Pigments.

GARY B. SEAVEY has been named Southeast regional sales manager at Chemfix Technologies Inc., **PHILIP N. BALDWIN JR.** has been appointed Midwest regional sales manager and **ARTHUR BUESING** has been named Northeast regional sales manager.

STEPHEN J. KLESTINEC has been named quality assurance manager in Georgia-



M.B. Eckardt — D.B. Harman

Bio-Lab, Inc. Appoints Manager, Sales Rep

Bio-Lab, Inc. has appointed Steve Carlyle to the newly created position of market development manager and Michael J. Ross technical sales representative for the company's BioGuard Swimming Pool and Spa Division.

Mr. Carlyle will be responsible for researching and defining market opportunities and will report to the director of commercial development.

Mr. Ross, a 16-year veteran of the pool industry, joins Bio-Lab Inc. from a company in Tustin, Calif., and will cover a seven county area in greater Los Angeles.

Steve Carlyle — Mike Ross

Pacific Corporation's Chemical Division, **ABU AHMAD** has joined the company as new business/process research and development manager at the firm's Decatur, Ga., laboratory, and **J. MICHAEL ROBERTS** has been

G. O'Connor — G. Cevallos

named research and development manager for thermosetting resins (Eastern region).

SHELDON NATOWSKY has been appointed marketing manager for stimulation additives in the Oil Field Chemical Division of ChemLink Petroleum Inc.

MEETINGS CALENDAR

December 15, 1986

THIS WEEK

NORTHEASTERN CHEMICAL ASSOCIATION, annual December luncheon, New York Athletic Club, New York, December 18.

SALES ASSOCIATION OF THE CHEMICAL INDUSTRY, annual Christmas party, New York Hilton Hotel, New York, December 18; education committee, seminar, "The Psychology of Selling," Treadway Inn, Saddle Brook, N.J., December 18.

JANUARY

CHEMICAL INDUSTRY ASSOCIATION, luncheon meeting, Parker Meridien Hotel, New York, January 29.

COMMERCIAL DEVELOPMENT ASSOCIATION, 8th annual industrial commercial development course, with Delphi Marketing Services, Inc., Sheraton Centre Hotel, New York, January 26-28.

SOAP AND DETERGENT ASSOCIATION, 60th Annual Meeting and Industry Convention, Boca Raton Hotel and Club, Boca Raton, Fla., January 29-February 1, 1987.

LATER ON

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, center for chemical process safety, International conference on chemical safety issues, Omni Shoreham Hotel, Washington, D.C., February 3-5.

AMERICAN PETROLEUM INSTITUTE, 12th world petroleum congress, international forum for exchange of technical information about the petroleum industry, Houston, Tex., April 26-May 1.

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, 12th annual Spring workshop and exhibition, Skyline Ottawa Hotel, Ottawa, Ontario, Canada, April 27-30.

CHEMICAL GROUP OF NATIONAL ASSOCIATION OF PURCHASING MANAGERS, mid-Winter conference, "Purchasing — Opportunity in a Changing World," Baton Rouge Hilton Hotel, Baton Rouge, La., February 18-20.

CHEMICAL MARKETING RESEARCH ASSOCIATION, Houston Meeting; "The US Chemical Industry-Responding to Change," Westin Galleria Hotel, Houston, Tex., February 4-5, 1987.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, 73rd mid-year meeting, Chicago Marriott Hotel, Chicago, Ill., April 26-29.

CHINACHEM '87, international exhibition on chemical and petrochemical industries, China International Exhibition Center, Beijing, China, April 3-9.

CHLORINE INSTITUTE, Winter meeting, Mayflower Hotel, Washington, D.C., March 15-19.

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, 61st annual dinner, Waldorf-Astoria Hotel, New York, March 19; Spring luncheon, Sherston Centre Hotel, New York, N.Y., June 11.

FERTILIZER INSTITUTE, 1987 annual meeting, Marriott Orlando World Center, Orlando, Fla., February 1-3.

FIRE RETARDANT CHEMICALS ASSOCIATION, international conference on flame retardancy and fire safety, Sheraton New Orleans Hotel, New Orleans, La., March 22-25.

INSTITUTE OF GAS TECHNOLOGY, 11th annual symposium on energy from biomass and wastes, Hotel Royal Plaza, Walt Disney World Village, Buena Vista, Fla., February 2-6.

INTER-SOCIETY COLOR COUNCIL, scientific conference, Williamsburg Lodge, Williamsburg, Va., February 8-11.

NATIONAL PETROLEUM REFINERS ASSOCIATION, 85th annual meeting, Convention Center, San Antonio, Tex., March 29-31; 12th International petrochemical conference, Convention Center, San Antonio, Tex., April 5-7.

POLYURETHANE MANUFACTURERS ASSOCIATION, Spring meeting, commercial development of new castable systems, Fairmont Hotel, Dallas, Tex., April 26-29.

SOCIETY OF THE PLASTICS INDUSTRY, 42nd annual conference of the reinforced plastics and composites institute, Cincinnati Convention & Exhibition Center, Cincinnati, Ohio, February 2-6; vinyl formulators division, 9th annual technical meeting and conference, Destin Hilton Hotel, Destin, Fla., April 8-10.

THE FERTILIZER INSTITUTE, 1987 Annual Meeting Marriott Orlando World Center, Orlando, Fla., February 1-3, 1987.

BUSINESS BRIEFS

B.F. GOODRICH CHEMICAL PRODUCTS & Chemicals Inc. has introduced a waterborne vinyl chloride polymer that is said to provide the properties of solvent-borne products. The new emulsion, called "Airflex" 7522 DEV, is designed for use in flexible packaging and coating applications. The emulsion complies with FDA regulations for food packaging use, Air Products says.

ALCO CHEMICAL Corporation has introduced two multi-functional aromatic acids, TMEDA and BTA. The former is a polymer building block offering improved tensile strength and dimensional stability for polyester/urethane films and fibers and the latter is an intermediate for fire resistant polyurethane and high-temperature epoxy coatings, according to Pittsburg, Kan.-based firm.

AMERICAN CYANAMID Company says its aromatic diolefin, "Dipeb," is available in commercial quantities. The product, meta di-isopropenylbenzene, is a reactive intermediate that can perform as a cross-linking agent or as a synthetic building block, Cyanamid says.

BASF GROUP is forming a printing systems operating division, effective January 1, in an effort to consolidate its printing products business and serve the graphic arts industry more efficiently, the company says. The new division will include K&E and Inmont printing inks, photopolymer printing plates, colorants systems for electronic printing processes and resists for the manufacture of printed circuit boards.

BADGER ENGINEERS INC., part of Raytheon Company, has been selected by Shell Oil Company to provide engineering, procurement and construction services for the rebuilding of a lube oil dewaxing unit. The work, to be completed on a turnkey basis, will take place at Shell's manufacturing complex at Wood River, Ill. The lube oil facilities had been damaged by fire two years ago.

DU PONT COMPANY's "Sellar" RB barrier resins are used by Penn Plastics Inc. in the first non-reusable plastic container listed by Underwriters Laboratories for the transportation, storage and use of flammable and combustible liquids. The resin is a specially modified nylon concentrate designed to be mixed with polyethylene and molded using proprietary processing technology.

PRODUCTS RESEARCH & Chemical Corporation says it has been granted a US patent on the chemical modification of a class of polymers known as "LP" (liquid polymer). "LP" is a trademark of Morton Thiokol Inc. The resulting new high sulfur polymer, "Permapol LPM," is described by Products Research as a major breakthrough in [illegible] cording to the company.

STERIVET LABORATORIES, Ontario, Canada, says it has received US Food & Drug Administration approval for "Synacid," a drug developed for the treatment of degenerative joint disease in performance horses. The US market potential for treatments such as "Synacid" is in excess of $60 million, according to the company.

SQUIBB CORPORATION has begun construction of a new employee services building that will serve as the main visitors' entrance to the company's manufacturing and research and development facilities in New Brunswick, N.J. The 64,000-square-foot-building will contain seminar and meeting rooms, offices, an employee store, career center, credit union and a cashier's office.